THE

WESTERN GLEANER,

OR

REPOSITORY FOR ARTS, SCIENCES AND LITERATURE.

VOL. II. FOR JULY 1814. No. 2.

ON DYEING.

[*Continued from page 17 of No. 1. Vol. II.*]

VII. OF DYEING BLACK.

There are few native vegetable juices that produce durable blacks on cloth, without the assistance of mordants. Of this kind is the *Cashew nut* or *Marking nut*, [anacardium orientale] a species of nut containing between the inner and outer shell, a fungous substance, filled with a viscous fluid in small quantity. This juice, rubbed on linen and cotton, gives a reddish-brown stain, which, by exposure to air, deepens to a full black that is quite permanent. It is used in India for marking linen and cotton cloths, from which circumstance it derives one of its names. This substance is collected in too small quantities to be extensively used in dyeing.

Several other native vegetable juices yield permanent blacks, without the use of any mordant; such is our *vine-poison* or *rhus toxicodendrum*, which yields a color almost entirely similar to that of the *Cashew nut*.

The black, however, commonly given to all kinds of stuff, is that which is produced by some vegetable astringent, particularly galls, with the salts of iron. The place of galls, which bear a considerable price, is frequently supplied by oak bark, oak saw-dust, sumach, the cups and husks of acorns, or other common astringents. Dr. Pennington of Philadelphia, recommend-

ed the *pig-nut*, *pig-hickory*, [juglans alba minima] which grows in abundance in the United States, as a substitute for galls, both for black dye, as well as for ink. Dr. Woodhouse dyed silk with an ink made of the fruit of the *persimmon-tree*, [diospyros Virginiana] which was as black, and bore washing as well, as that dyed with galls or logwood. Sumach is used for dyeing the black for Morocco leather.

In the combination of these astringent substances with the salts of iron, many circumstances must be observed, in order to produce a full and good color. Wool takes this kind of bl ck with much more ease than linen or cotton, and is dyed in the following manner:

The woollen cloth is first dyed of a very deep blue, with indigo, to give a fuller body of color. The black is then given by astringents and iron; the following is the process recommended by Hellot:

For every 50 lbs. of cloth, take 8 lbs. of logwood, and as much galls, either bruised or powdered; tie them loosely in a bag, and boil them in a moderate sized copper, for about twelve hours, with sufficient water. Put one-third of this decoction, with a pound of verdigris, into another copper, and soak the cloth in it for two hours, keeping the liquor scalding hot, but not boiling. Take out the cloth; add to the same copper, another third of the first decoction, with 4 lbs. of vitriol or sulphat of iron, which bring again to a scalding heat, and soak the cloth in it for an hour, stirring it well all the time. Then take out the cloth and add the remaining third of the decoction, with 8 or 10 lbs. of sumach; boil the whole; lower the heat with a little cold water; add a pound more of vitriol, and return the cloth for an hour longer. The cloth is then washed, and aired again, and returned to the bath for an hour; after which, it is well washed in the running water, and fulled. It is, lastly, passed through a yellow bath of weld for a short time, to give a higher gloss and softness to the black. It is then washed, and dried in the usual manner.

The common blacks, however, are given in a much simpler manner: the stuff, previously dyed blue, being first soaked in a bath of galls, and boiled for two hours, and then passed through

another bath of logwood and vitriol, at a scalding heat, for as much longer; after which it is washed and fulled.

Several observations are to be made on this process.

The previous dyeing blue, is not in the least necessary to enable the cloth to take the black afterwards; but it is found to be of great service in giving body to the color, and is never omitted in the finest blacks. The indigo blue is the best preparation for black, being a deep, heavy dye, which assimilates well with perfect black. When this proves too expensive for the stuff, it is sometimes prepared of a buff or fawn color, with walnut husks, instead of blue.

Black is never given by a simple operation; that is, the stuff is first impregnated with the galls, or other astringents, either at once, or by several processes, and afterwards passed into the vitriol bath. The color is thus rendered much faster, than if the whole ingredients were first mixed. A certain proportion must be observed between the astringent vegetables and the salt of iron: for, if the former are in too great a quantity, the black is again degraded towards a gray, rusty hue. Too long a maceration of the cloth has the same effect, and Berthollet remarks, that a rusty color is given to the finest black, by being passed through a fresh bath of galls. The black color is not entirely brought out, till after the cloth is exposed to the air; an effect similar to the well known deepening of the color of pale ink, some hours after it is used.

Logwood does more than merely add to the quantity of vegetable astringent, for it contributes much to the depth of color, and counteracts the brownish rusty tinge, which galls and iron are apt to give. When the cloth is not previously blued, logwood is particularly necessary. A very fine black is produced on blue cloth, according to Lewis, by 5 lbs. of vitriol, 5 lbs. of galls, and 30 lbs. of logwood.

The verdigris also has a good effect in improving the color; but it is not exactly known how it acts.

Wool is dyed black nearly in the same way as woollen cloth. The natural grease of the wool is first removed by boiling in a bath of stale urine and water; after which, the wool is dyed blue and black, nearly in the way above mentioned.

Some variety of the above processes is required, to give a black dye to silk. Raw silk, in the state in which it is spun from the coccoons, is covered with a natural kind of varnish, which gives it its beautiful orange yellow color; and also a degree of stiffness and elasticity, which is detrimental to the manufacture, and must be first removed. This is done by boiling it in water, for four or five hours, with a fifth of its weight of fine white soap, which dissolves this gummy water. The silk loses about a fourth of its weight in this process. To dye it black, it is then boiled three or four hours, with about three quarters of its weight of galls, and suffered to remain without boiling, for about a day, more or less, according to the kind of manufacture for which it is intended. It is then blackened in a bath of sulphat of iron, iron filings and cherry tree gum, with many manipulations, too numerous to be here described. Silk is seldom, if ever, previously blued, as wool is; but sometimes a root or fawn-colored ground is given by walnut husks. Silk requires many more dippings and alternate soakings with galls and iron, than wool does, to produce a full good color; the quantity of galls required, differs most remarkably, five or six pounds being sufficient for a hundred pounds of wool, but upwards of fifty for the same weight of silk. Hence the dyeing of silk is much more expensive.

Hats are dyed with only a single bath of the mixed ingredients. The bath is made of 100 lbs. of logwood, 12 lbs. of gum, and 6 lbs. of galls, boiled for some hours with water; after which 6 lbs. of verdigris and 10 lbs. of sulphat of iron are added, and the liquor kept just of a scalding heat. Ten or twelve dozen of hats are immersed, by a proper contrivance, into the liquid, for about an hour and a half, then taken out and aired, and another set immediately immersed for the like time. Each set is dipped and aired alternately, for eight times, the bath being occasionally refreshed by more of the ingredients. The verdigris is found by experience to be essential to the beauty of the dye. It is a much more difficult operation to fix a permanent black on linen and cotton, which will stand washing with soap, and long exposure to the air. The processes that succeed on wool, do not answer well here, the black being very liable to degenerate to a rusty brown.

Linen, or linen thread, is generally first blued with indigo, and then receives a mordant of alum, after which, it is passed through a bath of galls or logwood, or elder, and blackened with the iron solution, for which a variety of processes are given.

A fine durable black on cotton, is of still more consequence, in the present immense trade of printed cottons, than on linen; and much pains has been taken to equal the excellent fast black, given to cotton goods in the East Indies. Dr. Henrison has communicated for this purpose the following process:— Take Malacca-nuts, which are sold in Bengal at two shillings per quintal, boil them in water in close earthen vessels, with the leaves of the tree; during the boiling, a whitish substance, formed from the mucilage and oil of the nut, rises to the surface, which must be taken off and preserved. The cloth intended to be black must be printed with this scum and then dyed; after which, it is passed through lime-water, which changes the printed figures to a full and permanent black.

The following process for dyeing linen and cotton of a fine durable black, is given by Mr. Vogler, an eminent practical artist: Steep in a large bottle, a quart of soft water, with 2 or $2\frac{1}{2}$ ounces of common aquafortis, and throw in from 2 to 3 ounces of litharge. Set the bottle in a warm place, frequently shaking it, till a solution is made, which, when used, should be poured off clear from the sediment. In this dilute nitrated lead; first soak the linen or cotton thread, without heat, for ten or twelve hours, then take it out, wash it, and wring it well. Next dip the thread into a moderately strong warm glue water; wring it out, but do not wash it, and let it dry in the shade. Next make a decoction of $\frac{3}{4}$ of an ounce of galls in a quart of water: and when they have boiled for ten minutes, throw in $\frac{3}{4}$ of an ounce of salt. Then soak the thread therein for seven or eight minutes, with a boiling heat, wash, wring and dry as before. The thread has now a dark yellowish grey color. Afterwards, dissolve $\frac{3}{4}$ of an ounce of sulphat of iron, with as much salt, in a quart of clean hot water; soak the thread therein for eight or ten hours; after which, wash and dry. The color is now black, but is much improved by the following operations.—Boil $\frac{3}{4}$ of

an ounce of logwood in a quart of water for ten minutes; after which, add a quarter of an ounce of starch, and, when well mixed, put in the blackened thread or stuff, and boil it for 7 or 8 minutes; after which, wash it in cold water and dry. Lastly, the color which is much improved by the foregoing operation, is fixed by the following. Make a bath of one ounce of bruised galls, and a quart of pretty strong glue; and, when it has boiled for ten minutes, add a quarter of an ounce of starch; after which, when it has boiled for 10 minutes more, add one ounce of vitriol of iron, and allow the whole to cool with frequent stirring. Then soak the thread for an hour in the liquor, after which, wring it out, and dry it in the shade. The dye is then complete. Though the above process includes many operations, it does not appear needlessly complex; but, on the contrary, is very judicious, and agreeable to the long established practice of the art. Cloth of cotton or linen, may be dyed in this way, according to the author, as well as thread.

In England, a kind of acetite of iron, has been used for many years very largely, as a substitute for the sulphate in the black dye; and also partly, as a permanent and independent color, by which alone many useful shades of buff, nankeen and other dyes are given. This acetite is made by macerating refuse pieces of iron in sour beer, vinegar, elder berries, and other substances, that afford the vegetable acids, and produce in time, a very strong crystallizable, high colored solution.—Of late years too, the pyroligneous acid, [obtained from the distillation of wood, in making charcoal] and the empyreumatic acid of tar, have been used very extensively in calico-printing, for similar purposes, and with very complete success; but the precise mode of application is kept secret. It appears, that galls, or similar vegetable matter, are not required with this preparation, but the place is supplied with madder, which, with a deep iron ground, may be made to give a very dark purple brown, hardly distinguishable from black.

The following observations on a *new black dye*, to be applied to all kinds of linens and stuffs by Mr. Hermbstadt, may prove useful.

"The black colors, which are generally applied to linen and cotton stuffs, are composed of iron and vinegar. Their base is always oxide of iron, which is mixed with decoctions of wood of different kinds. All these colors incline either to red or blue; and they resist but feebly the action of the air, of water and of acids. The tincture which I have composed, and which I use daily, in dyeing all kinds of cotton, silk or wool stuffs, to an unalterable black, embraces an intimate union of the oxide of iron, with that of copper, and the pyroligneous acid."

"*Preparation of the pyroligneous acid.*—Take a tubulated retort, made of plate iron, or of cast iron, which is better; place it in a furnace in such a manner, that the neck be perfectly free, and the bottom receive directly, the heat of the fire. It must be luted carefully; and there must be introduced into the retort, chips of chesnut wood, cut into small bits. The distillation then commences with a very moderate fire, which is progressively increased, till no more liquid passes into the receiver. The acid which is found in the receiver, mixed with a kind of oil, may be separated from it by a filter of gray paper: the wood will be reduced to charcoal in the retort."

"*Preparation of the oxide of iron.*—Dissolve 4 pounds of green vitriol, very pure, in 24 pounds of rain water; dissolve in like manner, 4 pounds of potash in 12 pounds of filtered water. These two solutions, when well mixed, will appear at the beginning, of a deep green; but, in a little time, the surface exposed to the air, will take a dark red color; then pour the whole on a filter of linen: the oxide, which will remain after the water has passed, ought to be washed in a great deal of water, to free it from all adhering salt. Leave this oxide, exposed on a plate, to the action of the atmosphere, which will reduce it to a state of red oxide."

"*Preparation of the oxide of copper.*—To prepare this oxide, take a pound of blue vitriol of copper, [sulphat of copper] which dissolve in 12 pounds of rain water: make it boil, and mix with it a pound of water, saturated with potash, and you will obtain a green precipitate, which must be well washed after being filtered."

"*Preparation of the mordant for black.*—Take three parts of the oxide of iron, and one part of the oxide of copper: triturate them in a marble mortar, and pour on them the necessary quantity of pyroligneous acid to dissolve them. Filter the whole to separate the thick parts, and the mordant is made."

"*Application of this mordant in dyeing black.*—Steep the stuffs intended to be dyed in this mordant, thickened at pleasure. Afterwards, proceed to the dyeing in the ordinary decoctions made with different dye woods. The color obtained will be a very beautiful black, and almost unchangeable by all chemical agents. If the black is meant to serve for printing stuffs or cloths, it is thickened very much, and by mixing it with different tinctures of dye wood, it will form a black equally beautiful and lasting."

(*To be concluded in the next number.*)

ON SALT AND SALT-MAKING.

(*Continued from p. 26 of Vol. II.*)

II ON THE PREPARATION OF SALT.

WE now proceed to the mention of the methods by which are procured the immense quantities of common salt employed by man in almost every country on the face of the globe.

It has been already mentioned, that native salt is found, either solid, under the surface of the earth, or dissolved in natural brine-springs, which are always found in the neighborhood of rock-salt; or it is left by the spontaneous evaporation of many inland lakes and pools in different parts of the world; or lastly, an inexhaustible store of it is contained in the waters of the ocean. Sometimes the rock-salt is found sufficiently pure to be used without any preparation: this, however, is rare, for by far the greater part of the salt used throughout the globe, is got by evaporation of salt-water, either by natural or artificial heat, or often by both. The general process for making salt from brine by artificial heat is very simple and obvious, being little else than putting the brine into a broad shallow iron pan, bringing

it to a boiling heat by furnaces underneath, and continuing the evaporation nearly to dryness, during which the salt gradually separates as the water is dissipated, and is afterwards collected and gently dried. But there are several circumstances relating to salt-making, which deserve the attention of the chemist, and require to be related more at large.

We shall transcribe from the Archives of Useful Knowledge,* the process of salt-making as practised in Cheshire, England, this being the place whence most of the salt used in that country is obtained.

"The brine is first pumped up from very deep wells, by powerful machinery, and is discharged into a large pond or reservoir. If the brine is weak in salt, it is generally strengthened and nearly saturated by throwing in a quantity of the more impure rock-salt dug up in the neighborhood, particularly in those salt-works that have the convenience of water-carriage from the pits. There is a considerable difference in the purity of the brine from different pits, all contain a small portion of earthy salt, chiefly sulphate of lime, and a small quantity of carbonat of lime held in solution by an excess of carbonic acid, and frequently also a little carbonat of iron. The purest brine is perfectly limpid, of a pure saline taste, and a peculiar cold green hue. This last indicates the absence of iron, for when even the smallest admixture of oxide of iron is present, the water has a yellowish cast, and the salt made from it never acquires that delicate blue-whiteness, which is considered as a criterion of its perfection. The salt-pans where the brine is boiled down are oblong shallow troughs of wrought iron, usually from 20 to 30 feet long and broad, and about 9 to 12 inches deep. They are set strongly upon masonry, over a large furnace, the flues of which draw all round the pan. The fuel is coal, of which there are many pits at no great distance. Each pan stands in a small covered building, with a pyramidal roof formed of boards sloping downwards, but with a considerable interval between each, so as to keep off the rain, and at the same time to allow of a free passage for the steam of the boiling brine. The whole pro-

* Dr. Mease's Archives of Useful Knowledge Vol. II. p. 338.

cess of boiling, purifying, and evaporating the brine, is performed in this single pan.

"The brine after standing some days in the reservoir, is pumped into the pan. When heated to about 100° it begins to grow turbid, owing to the deposition of the carbonat of lime and of iron (if any) by the expulsion of the carbonic acid which held them in solution. This forms a scum on the surface of the brine, which is partly removed by a skimming dish, but much of it falls to the bottom, and if suffered to remain would materially injure the quality of the salt. To clear it out, the brine is evaporated till it begins to *salt*, that is, till a portion of the muriate of soda (common salt) begins to separate, and this falling to the bottom mixes with the carbonat of lime, and gives it a body, which enables the workmen to draw it out. This is carefully done, and the sediment thus obtained (called *clearings*) is thrown away, which, from a pan of 24 feet by 27, usually amounts to about three or four bushels. The evaporation is then continued at a boiling heat, and the salt gradually collects at the surface and falls to the bottom, in beautiful crystals of a pure and delicate white, where the brine is good. As the process advances, and the salt collects in quantity, it is fished out from the bottom of the pans by wooden vessels, and poured into large hollow wooden cones, with a hole at the bottom, and suspended round the sides of the pans. Here it drains, and the drainings drop again into the pans. When the process is completed, and the contents of the pan evaporated almost to dryness (which usually takes a single day and night) the cones full of the salt are taken to a large room made very hot by stoves, where they remain till thoroughly dry.

"The grain of the salt is determined by the rapidity of the evaporation and the degree of heat used. In the common salt-making, the water is evaporated at a full boiling heat, that is, as fast as possible, and hence the grain is small, and the salt comparatively soft. The contents of a single pan, are usually worked off in twenty-four hours, except from Saturday to Monday, when two days are taken, and hence a larger and harder grained salt is made, which is much esteemed in the country for salting cheese.

"It is found by experience, that some brines will not readily *salt* by mere evaporation, but that some addition is required to make them work well, and the salt fall regularly. This addition is generally calve's feet jelly, sometimes glue, sometimes whites of eggs, sometimes blood, and in short, any animal or vegetable mucilage seems to answer the purpose. It is usual to have standing in a corner of the pan, an earthen vessel, containing eight or ten pair of calve's feet, in which hot brine is added to extract the jelly, and after the *clearings* are removed, and the brine begins to salt, the workman adds a little of the jelly at discretion. The precise use of this addition is by no means obvious, nor is it absolutely necessary, but long experience has shown it to be useful in many kinds of brine.

"Another difficulty sometimes arises. In general the brine when it once has begun to *salt*, goes on to work well to the last, every part of the surface being sufficiently covered with small crystals of salt which soon grow into a group, forming a small floating island of salt, which soon sinks to the bottom by its own weight, and leaves a clear surface above, which again is covered in the same manner. But sometimes, from some unknown cause, a thick shapeless crust of salt forms rapidly over the whole pan, which soon hardens to a dry floating cake of salt, preventing in a great measure the escape of the steam, and materially retarding the process. To remedy this, a small lump of butter, not more than about half an ounce, is thrown into the pan, which quickly melts and diffuses itself over the dry cake of salt, and causes it to break up and sink, after which the salting goes on well.

"After the brine has been evaporated nearly to dryness, and indeed during the latter part of the boiling, there is deposited on the bottom and sides of the pan, a hard white saline and earthy crust, which strongly adheres to the pan, and is partly fused to its surface by the intensity of the fire, in proportion as the sides become dry by the loss of liquid.

"This crust daily accumulates and produces much inconvenience, partly by injuring the quality of the salt, but chiefly by increasing the distance between the fire and the brine, and forming a thick coating through which the heat penetrates with

difficulty. Hence it becomes necessary about once a month, to discontinue the boiling for a day, and to pick and beat off this crust with a hammer and chissel, often to the great injury of the pan itself. The *pickings* or *panscratch*, as they are also called, are thrown away. Their analyses will be mentioned afterwards.

As the greatest inconvenience in salt-making is the precipitation of the earthy impurities, and the difficulty of preventing them from mixing with the salt; a plan has lately been adopted (under patent) in some works near Northwich, of heating the brine in a separate pan to the degree at which the earthy carbonates precipitate, before it is sent into the large salting pan. It is found that the same fire, by extending the flues, will heat this preparing pan which is contiguous to the other, and the time in which one panfull is worked off is sufficient to bring the fresh portion to the requisite heat, and to purify it considerably.

"We shall now relate some of the leading circumstances of the preparation of salt in foreign countries, as far as they differ from that above described.

" When a weak brine is exposed to the atmosphere, the watery part gradually evaporates, and with it the carbonic acid, which it contains, the effect of which is to concentrate the solution, and also to cause the deposition of the earth and oxide of iron which the carbonic acid held dissolved. As evaporation much depends on the surface exposed to the air, a very ingenious method has been adopted of promoting this, by causing the weak brine to fall successively through large bundles of faggots, whereby a vast consumption of time and fuel in the subsequent evaporation is prevented. This operation is called *graduation*, and the place in which it is performed a *graduating house*.

" This consists of a very long range of rows of faggots, placed perpendicularly, and rising to the height of about 25 feet, and disposed in cones, the summits of which are about 6 feet in diameter, and the bases about 10. Just above the faggots is a trough perforated with holes at small intervals, furnished with stopcocks, and the whole covered with a pent-house roof. At the bottom of the faggots is another trough to catch the brine.

The length of these houses is determined by the quantity of brine wanted; sometimes it is enormous. In some parts of Germany there are graduating houses six thousand feet long, but in general they are from 200 to 1000.

"The weak brine is first raised by pumps to the upper trough, when the stopcocks are turned, and the water made to fall like a shower of rain through the faggots into the trough below. It is then again forced up and undergoes the same operation successively till it is sufficiently concentrated. The state of the atmosphere has the greatest influence on the graduation of the brine. The evaporation goes on the quickest in a dry air with a moderate wind: when the wind is violent much of the brine is carried away in a state of spray or vapor, particularly when the column of faggots is not pyramidal, but has the same dimensions throughout. As a proof of this waste, Haller observes, that in the neighborhood of those graduating houses, the ground becomes in a few years covered with the salicornia and other plants, which are known to require a salt soil and flourish on the sea-shore.

"It has been mentioned, that in proportion as the brine becomes concentrated it parts with its carbonic acid, and deposits carbonate of lime, and hence the faggots of the graduating houses become gradually encrusted, over every twig, with a brown hard earthy matter, consisting chiefly of carbonat of lime. Thus in a course of years the faggots are entirely covered with stalactite, as in the common petrefactions, and the surfaces for evaporation become thereby so much diminished that it is necessary to replace them with fresh faggots. The time that one set of faggots will last, is about eight or ten years.

"The effect of graduation in concentrating brine is very striking. Baron Haller in his valuable memoir on the subject gives the result of many observations on this and other particulars relating to the salt-works in Switzerland, of which he was the director.

"The brine springs in England, seldom contain more than one per cent. of salt in the natural state, but by mere graduation the brine is brought as high as 20 per cent. after which, it is ready to be boiled down as usual. To effect this concentration,

therefore, 20 parts of brine, must part with 19 by evaporation through the faggots. The deposition of stalactite hardly begins till the brine is brought to 5 per cent. of salt, and it ceases altogether when it is brought to 15 per cent. The graduation of the brine becomes slower as the concentration increases. With regard to the actual effect of a given quantity of faggots, Haller finds that at a mean degree of concentration, or 10 per cent. the evaporation of a single day in Switzerland, taking the average of the entire year, is 1100 cubic feet, (reckoning the weight of the cubic foot at 46lb. of 18 oz.) in a row of faggots 20 feet high, and 735 long. When the sun shines strongly, the exhalation is more than double the above quantity.

"A graduating house of the above dimensions is estimated to have always at work about 1,912,000lb. of brine, and this quantity is furnished eleven times in the year to the boiling pans. There appears to be two inconveniences in graduation, one, which is but trifling, is, that the brine extracts at first some coloring matter from the faggots, which is never totally got rid of in the subsequent evaporation, so that the salt has a little brownish tinge. The other is more serious, and it is the actual loss of brine by graduation, either when the wind is too violent, or the process managed unskilfully and the faggots not well arranged. This in some salt works is estimated as high as from 30 to 40 per cent."

(To be concluded in the next number.)

APHORISMS OF POLITICAL ECONOMY.

(Continued from p. 33.)

CHAPTER V.

OF THE NATURE AND THE FUNCTIONS OF MONEY IN MODERN POLITICAL ECONOMY.

¶ 126. Writers on political economy have frequently considered money as the common measure, the sign, or the instrument of exchanges; and it has been thought, that in the interior commerce of a country, it was absolutely indifferent to

employ for that purpose any material whatever, provided it did unite the advantages mentioned in ¶ 79, and that it was not chosen from among the vilest productions of the earth.

¶ 127. In this hypothesis the most indispensible condition of every exchange seems to have been altogether overlooked, viz. the equality of the two things to be exchanged in the compound ratio of the quantity and quality of labor which their production or preparation had required. [Compare ¶ 73—¶ 76.] This equality would become impossible, if in any exchange the thing which had been given or received was not the equivalent of the other thing acquired in return.

¶ 128. It is true, that the impossibility of expressing in determined numbers the precise quantity and quality of labor which the production or preparation of any merchandise has required, has obliged every nation to substitute to the appreciation of the real value, a value merely appreciated by approximation, but this last value is in the price of most merchandises, as nearly as possible regulated by the former. The real value or the value of labor, is for them a kind of central point, towards which their price is continually tending, and from which they can never deviate for a long time in any sensible manner.

¶ 129. If the precious metals under the form of money *seem* to be excepted from this appreciation, it is merely by fiction. Perfectly similar to every other merchandise, because they are proper to many other purposes of consumption, their price depends equally on their real value, and on those accessary circumstances which heighten and lower the price of merchandises, but as the weight and the standard of these metals can be appreciated with accuracy, it has been generally agreed upon to consider the quantity and the quality of labor required for their extraction and preparation as equal to their weight and to their standard.

¶ 130. By means of this fictitious appreciation, it was only necessary in every exchange to appreciate by approximation the real value of one of the two things to be exchanged, because the real value of the other, viz. of the precious metals, admitted of a precise measure. This fiction, moreover, has given to every nation the advantage of referring with facility in every

exchange the two terms of the equation to a common measure, and consequently of rendering them homogeneous.

¶ 131. Hence it is evident, that in the exchanges operated by the intervention of money, the most essential condition in every exchange, viz. equality, was by no means to be altered. The only modification, which the system of political economy was to undergo by this intervention, was to render the exchanges more universally practicable, by giving to money the character of a representative of the one of the two things to be exchanged.

¶ 132. If experience seems to have proved in favor of those writers of political economy, who have considered money as a simple sign, that at one time it commands a much higher real value in merchandise than it possesses itself, while at another, merchandise commands a much higher real value in money than the former possesses intrinsically, these phenomena are to be referred to particular causes, whose action is not universal, and more particularly to the false systems of political economy which have been almost constantly in contradiction with every true principle.

¶ 133. Another error into which Economists have frequently fallen, is, to have considered as entirely indifferent whether an agricultural nation did perform their exchanges with much or little money, supposing, that the difference of these two circumstances could have no other effect than to oblige the individuals of a nation to represent the value of their merchandise by a higher or by a lower price, or in other words, by a greater or smaller expression in the weight and standard of the precious metals.

¶ 134. It is easy to conceive, how much this opinion is contrary to the principle of the equality of exchanges. For, if, as we have stated [¶ 129] the precious metals under the form of money, contain, like every other merchandise, an intrinsical value, and if, on the other hand, the labor of man is susceptible of an infinite number of modifications with regard to its quality and its quantity, it is evident, that the products of these various kinds of labor can be represented only by a corresponding quantity of the precious metals under the form of money.

¶ 135. By following up this principle of the equality of exchanges, we will conceive, that the labor which is limited to the production and collection of the raw materials furnished by the earth, must be represented by a less quantity of money than that which is bestowed upon manufactured articles, because this labor is superior in quality to the former. A nation that would add to their agricultural pursuits those of manufacturing industry, without having increased previously their stock in money, would be in the case of consenting voluntarily to exchange a superior intrinsic value for an inferior one.

¶ 136. The principle established in the preceding paragraph, is not founded on reasoning alone, it is likewise confirmed by experience. Never any poor nation, among whom a small quantity of money only was in circulation, has been capable of carrying its industry much beyond agricultural pursuits, and it is only among nations provided with a large stock of money, that manufactories have ever attained a full and entire development ; and whenever any of these nations, have been deprived of a large portion of their circulating money, this event has been invariably followed by a corresponding decline of their manufacturing industry.

¶ 137. The natural and necessary effect of the increase of money in a nation, is consequently, to increase its industry in the same proportion; as on the other hand, the diminution of money in a nation is equally followed by a diminution of its labor and of its industry.

¶ 138. Hence, as a nation which increases the total amount of its industry, together with the increase of its stock in money, adds likewise essentially to the real value of its merchandise, such a nation is enabled to represent its merchandise by more weight and standard of the precious metals, without increasing their prices, because it is not the same, but a superior real value that is represented by more weight and standard of the precious metals.

¶ 139. In the like manner, as a nation which diminishes the total amount of its industry with the diminution of its stock in money, diminishes also necessarily the real value of its merchandise; it is evident, that in a great number of exchanges, mer-

chandise may be represented by less weight and standard of the precious metals, without the price being diminished on that account, because it is not the same but a less intrinsic value that is represented by less weight and standard of the precious metals.

¶ 140. It is so little true, that the increase of the circulating money is necessarily followed by a higher price of merchandises, that we see, on the contrary, among rich nations the price of a number of things inferior to that which the same articles have among poor nations, for, however considerable may be the stock in money of any nation, the improvement and simplification of labor, which, in the natural course of things will take place in that case, will allow that nation to represent their merchandise by less weight and standard of the precious metals, or in other words, by an inferior price.

¶ 141. If, nevertheless, it is indisputable, that since the discovery of the gold and silver mines in South America, the price of all merchandises has been considerably higher among almost all civilized nations, it follows only from this fact, that moral causes, mostly founded in errors of administration, have prevented these nations from carrying their industry to the level of the total amount of their stock in money. For, as by these means those nations were continually possessed of a larger intrinsic value in money than of wealth in merchandise, it is natural, that in all their exchanges the real value of merchandise must have been represented by a superior value of money.

¶ 142. The increase of the circulating money will further create a higher price of merchandises, when it takes place on a sudden, and when the money, instead of being distributed among all classes of society by means of commerce, is heaped up in the hands of a small number of individuals. Money, when increasing in any country gradually, is like the dew which refreshes nature, but when poured in by torrents, it will enervate industry and spread all around its destructive ravages.

(To be continued.)

BIOGRAPHY.

THE LIFE OF ANDREW MICHAUX,

BY J. P. F. DELEUZE.

Translated from the French.

[In a former part of our publication, we have already given a specimen from the elegant and learned pen to whom we are indebted for the present Biography. The name of Michaux, which we have likewise introduced before, must be dear to every American. He spent amongst us an interesting part of his life, and his labors have been of the most essential service to the advancement of botanical science in this country.——*Editor.*]

The vegetables which adorn and enrich our fields are for the most part, the conquest of human industry. Our pulse and our fruits come from various countries, and have been in their wild state much inferior to what they are in our gardens. Observation has gradually led to their discovery in their native soil; culture has improved them, and commerce has transplanted them from one region into another. After various essays, the most productive species, and those which were the most suitable to every particular soil, have been chosen, and many countries, whose inhabitants were scarcely capable of supplying themselves with the necessary food, have since offered abundant crops to a numerous population.

Of nearly 250 species of trees, which at present cover the soil of France, more than the three-fourths are of foreign origin. Among these exotics, some furnish us with the most delicious fruits; others are employed in architecture and in the arts, and others, finally, are used as an ornament for our gardens, and reproduce in our parks the picturesque scenery of those countries which are the most favored by nature. The walnut-tree has been transported to us from the Pontus, the cherry-tree from Cerasuntum, the olive-tree from Athens, the peach-tree from Persia, the mulberry-tree from China, the fig-tree from Syria, the apricot-tree from Armenia, the grenade-tree from Carthage, and the orange-tree from India. The same has taken place with regard to plants: the native country of wheat is unknown, but several of our pulses and of

the best kinds of fodder for our domestic animals are originally from Asia. The discovery of America has procured us the maize (Indian corn) which forms the principal food of several nations on our continent, the potatoe, which has so considerably increased the population of Ireland and of Switzerland, and which in the north of Europe has become such an important article of subsistence, and a number of useful trees, such as the acacia, the tulip-tree, different species of pine, of maple, of ash, &c.

These riches may be still increased every day, but in order to procure them, it is not sufficient to rely on the zeal of mercantile agents, who will send only those productions which are to be found near the coast; it is absolutely necessary that naturalists should penetrate into the interior of the country, that they may know how to distinguish and to select what will be really applicable to useful purposes.

We have permitted ourselves these reflections, in order to shew the better, how much gratitude we owe to those courageous men, who, with an intention of serving society, renounce its comforts and go to search after the unknown treasures of nature, in desolate and wild countries.

These reflections are not foreign to our subject. The man of whom we are about to speak, has a right to be reckoned among the benefactors of the human species. In tracing the picture of his laborious life, we will shew how the passion of the sciences and of agriculture, united with the most ardent love of his country, made him conceive the most extensive plans, and gave him for their execution, that intrepidity which defies danger, and that strength which is superior to fatigue and overcomes every obstacle.

Andrew Michaux was born at Satory, a royal domain situated in the park of Versailles, on the 7th March, 1746. At 10 years of age he was sent with his younger brother to a boarding school, where they both remained during four years. The father, who destined them to succeed him in the culture of the farm of Satory, which was under his care, thinking any farther prosecution of their studies useless, recalled them home, and

attached himself to give them at an early age, the habits of rural pursuits and a taste for simplicity.

Young Andrew whom nature had endowed with an extreme activity, took in a short time the greatest relish for the labors of agriculture. He observed the productions of the earth, tried experiments, went to examine the gardens, and wishing to unite theory with practice, devoted to study all his leisure hours.

He lost his father in 1763 and his mother in 1766. Having remained depositary of the fortune of his sisters, he shared with his brother the cares of the farm, until 1769, when they separated their interests. During this interval he studied the elements of the Greek language, and perfected himself in the knowledge of the Latin.

In October, 1769, he married Cecilia Claye, daughter of a rich farmer of la Beauce. He lost her in September, 1770, after having had with her a son, and this loss plunged him into despair. M le Monnier, informed of his situation, conceived for him the most tender interest, and engaged him to visit him frequently in his garden at Montreuil near Versailles. This celebrated character, who was so much esteemed at court, spent his leisure hours in conversations with the unfortunate Andrew; he endeavored to solace his mind by imparting to him some notions of botany and some elementary principles concerning the naturalization of foreign vegetables. The farm of Satory containing five hundred acres of land, he advised him to devote some acres to agricultural experiments; Michaux cultivated there the madder and the naked barley, both which succeeded perfectly well. M. le Monnier spoke then of him to M. d' Angivillier who charged him to make trials with the culture of the *tef* of Abyssinia, an excellent forage, of which Mr. Bruce had sent some seed to France. The account presented by Michaux of his experiments, gave the most favorable idea of his talents.

In the meanwhile he was overwhelmed with grief; the remembrance of her whom he had lost was incessantly recalled to his mind by the spot which he inhabited. This state of inquietude awakened again in his mind the desire of travelling, which he had fostered from his infancy. We have heard him often

say, that having read Quintus Curtius at the age of fourteen years, the description which this author gives of the provinces conquered by Alexander, inflamed his imagination to such a degree, that he was continually panting after the happiness of visiting the oriental countries.

This impression had not been effaced by age; it had been submitted to the scrutiny of reason; it was no more a vague desire of visiting new regions. By leaving a residence painful to his heart, Michaux wished to be useful to his country. With this intention he formed the plan of exploring countries little known and situated under a climate analogous to that of France, to carry back their most interesting productions and to naturalize them among us. Feeling the want of sufficient knowledge to travel with fruit, he renounced his farm in favor of his brother and devoted himself to study with renovated ardor.

In 1777 he established himself at Trianon to study botany under Bernard de Jussieu, to whom M. le Monnier had recommended him, and in 1779, he came to lodge at Paris near the botanical garden, in order to acquire general ideas on the different parts of natural history.

Having terminated these studies, he thought that the profession of a traveller like any other, required a particular apprenticeship, and that it was necessary to acquire the habit of travelling, in countries where every kind of support may be easily found, before venturing into unknown and desert regions. He went first to England; the English were at that time almost the only nation who attached themselves to the culture of foreign vegetables. Michaux was transported at the sight of their collections, and he brought home a large number of trees which he planted in the garden of M. le Monnier and in that of the Marshal de Noailles, where they succeeded perfectly. He very frequently took from these gardens a bundle of grafts, and roaming through the woods of Versailles, engrafted a number of trees by methods which were peculiar to himself.

In 1780, he went to collect plants on the mountains of Auvergne in company with several botanists. Messrs. de Lamark and Thouin were of the number. These gentlemen have

related to us, that, as soon as they had left the place where they had spent the night, Michaux, charged with his gun, a knapsack, a port-folio, and several boxes of tin, went before them and gained rapidly the summit of the mountains. He had in his pocket seeds of the cedar of mount Liban, which he sowed in favorable places: one might see him at a great distance, conversing with the shepherds, or hear him discharging his gun, and in the evening he would come back to the appointed place of meeting, charged with a collection of plants, as likewise of birds, of minerals, and of insects.

After this time he addressed M. le Monnier with the request to obtain for him a commission to travel, in countries where he might make new discoveries. M. le Monnier promised to seize upon the first opportunity. This presented itself very soon. M. Rousseau, nephew to the celebrated Rousseau of Geneva, had just arrived at Paris. He had been at Ispahan and had been appointed consul in Persia; Michaux was authorised to accompany him, and Monsieur, brother to the king* assigned to him an allowance of 1200 livres. Michaux did not permit himself the least observation on the insufficiency of this sum, he made at his own cost all the necessary expenses, and departed with the consul in 1782. They first went to Aleppo,† and thence to Bagdad, where they arrived after forty days march

* The present king of France, Louis XVIII.

† I subjoin here the extract of a letter of Michaux to Mr. Thouin, which has appeared to me sufficiently interesting to be preserved.

Aleppo, 30th July, 1782.

MY DEAR FRIEND,

I landed at Alexandretta on the 30th of March. I cannot express to you sufficiently, with what joy I went to visit the fields. When considering the immense number of plants, with which the meadows were covered, I was frequently dazzled and obliged to compose my spirits for some moments. I could find no rest during night, and I awaited the break of day with impatience. What satisfaction to find myself in Asia, and to roam at pleasure over high mountains and through vallies covered with liliaceæ, orchideæ, Daphnes, rose-laurels, vitex, myrtles, andrachnes, styrax, palm-trees, and other vegetables, different from

through the desert. There Michaux left the consul; he now traversed those countries formerly so flourishing and in our days so much devastated, situated between the Tigris and the Euphrates, and he went to Bassora, where he made a stay of some months, to get information respecting the country, and to render himself familiar with the Persian language. He wrote a dictionary of that language which I have under my eyes, and which forms a very large volume.

those of Europe. The sea-shore was covered with shells various in their form and color; land and sea birds came every morning to feed upon them; the cormorants resorted there in flocks of three or four hundred. The swamps were filled with reptiles. Unfortunately, most of the plants were not yet in blossom, and the mountains were infested by the Bayas, who last year, pillaged the caravan of Alexandretta, and who, a few days before our landing, have put to flight the troops sent to this town, and burnt several houses.

Since my arrival at Aleppo, I have made two excursions into the mountains: the city is situated on the border of a valley, where there are many gardens filled with trees of which no one is engrafted. The remainder of the neighboring country is dry, stony and uncultivated. At six miles around not one tree or shrub is to be seen. Beyond are extensive plains whose fertility would be prodigious if they were cultivated. Formerly there had been in these plains villages which have been successively ruined; the predecessor of the present pacha destroyed more than eighty of them under the pretence that the inhabitants had formerly revolted. His soldiers committed the most unheard of cruelties; they entered the houses and cut off the heads of the women and of the children, merely to take the pieces of gold which formed the ornaments of their hair dress. It is by similar vexations that the pachas indemnify themselves for the tribute which they are obliged to pay to the grand Signior. These ruined villages are now the hiding places of robbers.

Travelling is equally painful and dangerous in all that part of Asia which extends from Syria to the frontiers of India. Provisions must be carried along by travellers; they are obliged to sleep in the open fields, for the caravanserais are avoided on account of the insects and the prevailing nastiness. It is necessary to follow the caravans, otherwise one would be robbed by the Arabians in the plains, and by the Curdes in the mountains. These caravans are frequently attacked.—During the last month of March three hundred and eighty camels have

Persia was at that period a prey to civil wars, and the Arabians pillaged its frontiers. Michaux endeavored to enter this country by Boucher, a sea-port of the Persian gulph, but he was taken and plundered by the Arabians, who left him nothing but his books. Naked and without resources, he did not know what to do, when he was protected by Mr. de la Touche, the English consul at Balsora, though peace had not yet been concluded between England and France. M. de la Touche thought that a naturalist who was travelling for the good of mankind, ought to be protected by all nations; and he furnished him with the necessary means to continue his journey. Michaux arrived happily at Shiras, he remained there some time, and thence he proceeded to Ispahan. From this moment, traversing mountains and deserts, he explored during two years the provinces of Persia, from the Indian to the Caspian seas. He proved the truth of the assertion, that the provinces situated between the 55th and the 45th degrees of latitude, are the native countries of most of the trees and plants which enrich our fields. There grow naturally the walnut, the cherry, the vine, the speltz, the luzerne, the sainfoin, the sugar pea, the onion, the lily, the tulip, &c. He made likewise observations on the culture of the date tree, and verified a very remarkable fact, already stated by Kempfer, viz. that the male flowers of the date tree, preserved during one year, are still proper to fecundate the female flowers.

been carried off from the caravan of Alexandretta, and the one which has lately started has been obliged to halt for ten days to wait for the arrival of the troops, which the pachas of Aleppo and of Antiochia have sent to escort it. It is absolutely necessary to hire an Armenian to watch by night with him by turns, because the conductors of the caravans are mostly sharpers, who endeavor to steal without being perceived.——

Meanwhile I am to leave Bagdat, which will take place only in a month, I shall make a botanical excursion of one hundred and fifty leagues. I shall pass through Antiochia, Laodicea and Seleucia. I hope to find medals in the latter city. On my return I shall send to you a fine parcel of seeds, as likewise to M. de Malesherbe. Our consuls and merchants in this country, are witnesses, that no one labors with as much ardor for the advancement of his fortune, as I do for that of botany, &c.

Though botany was his principal object, he did not neglect to pay attention to every other branch of science.

We are indebted to him for the preservation of a Persepolitan monument, very interesting in its nature and very well preserved, which was found at one day's journey below Bagdad, in the ruins of a palace known under the name of the garden of Semiramis, near the Tigris, and now deposited in the cabinet of antiquities of the national library. It is a stone in the form of a pear, somewhat flattened on its two sides, one foot and a half long, and one foot wide, and of the weight of 44 pounds. It is worked on its two sides: on the upper part are several symbolical figures; below is a long inscription in two columns, the one of 25, and the other of 26 lines. The explanation of this monument, which Mr. Millin has published, has given occasion to many controversies; but the whole is yet a mere matter of conjecture.

It is scarcely to be conceived, how Michaux could accomplish so many things with so scanty resources, in a country agitated by wars, where troops of plunderers infested the country, where it was necessary to march always in arms, to form frequently caravans to go from one country to another, and to avoid at one time the robbers, at another to put them to flight by a vigorous resistance.

The character of the man is strongly marked in the notes of his journal; when relating a journey which he made in a boat on the Tigris, he regrets that during some hours of stay which they made, he could not collect plants on the neighboring hill. "The Arabians" says he, "had taken from me my shoes, and the soil was so burning, that it was impossible for me to set my feet elsewhere, but on the spots covered with water." In describing his painful situation, the only loss by which he seems to be affected, was that of an opportunity favorable to his researches.

Michaux returned to Paris in the month of June of the year 1785. He brought back an extensive collection of dry plants, and a large number of sets. We are indebted to this journey for several plants, which now are frequently cultivated in the gardens of the lovers of botany, such as the *rosa simplicifolia*,

zoegea leptaurea, michauxia campanulata, &c. All men of science received him with marked distinction: they alone could appreciate the merit of a man who made no endeavors to shine. They judged that the services which he had rendered, and the sacrifices which he had made, deserved a recompense. Michaux asked only to be commissioned to make a new journey; he desired to return to Asia, to visit the countries situated to the east of the Caspian sea, and to proceed afterwards to Thibet and the kingdom of Cashemire, whose productions are so little known, and where several objects of commerce and manufactures are to be found, which he wished to introduce into France; but his solicitations proved useless. The government wishing to enrich France with several trees which grow in North America, he was chosen for this commission, and he started on the first September of the year 1785.

According to the instructions which were delivered to him, he was charged to travel through the United States, to collect there seeds and sets of trees and of shrubs, to form of them a deposit in the vicinity of New York, and to send them over to France, where the park of Rambouillet was destined to receive them. As it was desirable to have the largest possible number and to distribute them afterwards, it was required, that he should not send any to others; he was only permitted to forward two boxes in the year to M. le Monnier and two to the botanical garden. He was likewise requested, to send over from America, such game as it would be proper to naturalize in the plantations of the trees of their country.

Michaux arrived at New York in the month of October, 1785. He made that city his principal residence during nearly two years; he established in its vicinity a garden, he explorated the botany of New Jersey, of Pennsylvania and of Maryland, and during the very first year, he sent to France twelve boxes of seeds, five thousand sets of trees, and partridges of Canada that multiplied at Versailles. In September 1787, he set out for South Carolina, and considering Charlestown as a central point, whence he might direct his excursions to the south and to the north and visit the chain of the Allegheny mountains, he resolved upon forming there his principal establishment; for

this purpose he purchased, about nine miles from the city, a tract of land destined to receive the seeds and scions which he would bring back from his excursions, with an intention of sending over to France such plants only as by careful attention were in the most vigorous state, and consequently much preferable to those which are found in the woods. In the meanwhile that he was engaged in penetrating into the interior of the country, he left his son at Charlestown to take care of his garden. He had improved the method of packing to such a point as to include in one box several hundred young trees, which arrived in France in the most perfect state of preservation. The invoices were accompanied with instructions on the most proper culture of every species of trees, and on the particular utility which might be derived from them. This correspondence took place between him and the Abbé Nolin, who was at that time Director of the nurseries.

In the month of April he set out with an intention to explorate the sources of the Savannah river; it was in this journey that he discovered the *magnolia auriculata*, the *azalea coccinea*, a new species of *kalmia*, the *rhododendrum minus*, the *robinia viscosa*, several species of oak and various trees, which, though not unknown to botanists, had not yet been cultivated in our gardens.

Encouraged by these discoveries, he wished to visit the summit of the Allegheny mountains. For this purpose, he formed connexions of friendship with the Indians, among whom he chose some guides; he paid them in advance part of the price agreed upon, and promised them a full reward on his return, and having thus secured their good will, he ascended in their company, the rivers which flow into the Savannah.

In those uninhabited regions, the forests are almost impenetrable; there being no other paths* but those opened by the wild

* The reader will remember that this description relates to a period which is already far remote from us. In the space of 27 years, which have since elapsed, the state of that country has essentially changed, and it is known that a tolerably easy road is now opened, which leads from South Carolina and Georgia across the mountains and through the territory of the Creeks to the Mississippi.—*Editor.*

beasts. The bed of the torrents is the only route that can be followed; and these must frequently b fo ded or passed over by means of the trunk of a tree, which is thrown across; on the banks are, here morasses, into which the feet of the traveller sink at every step, there vines beset with thorns, which inflict severe wounds. It is impossible to subsist otherwise than upon the uncertain produce of the chace, or upon some wild fruits which chance may occasionally offer. Michaux had lost two of his horses, and he reserved the third to carry the plants which he might gather: had he carried provisions along with him, the Indians would not have possessed foresight enough to use them with economy. He trusted their good faith, and had never to repent of it; but their want of complaisance gave him frequent inquietudes; it was necessary to keep them constantly in sight; sometimes he was even forced to run to prevent his being separated from them; he had adopted all their boldness and hardihood. Of all the Europeans whom they had known, he was the one, in their opinion, who had most *spirit*. "The people of your country," said they, "are very stupid; they do not know how to live in the woods, and when they have lost their way, they are incapable of finding it out again."

When Michaux fell in with an agreeable situation, he cut branches of trees, constructed a small cabin, and made thence excursions into the neighborhood. He returned to his cabin in the evening, to spend the night, and put in order the vegetable riches which he had collected. While he was engaged in his botanical excursions, the Indians went out hunting, and came back in the evening to make fire and to cook their game. I shall observe on this occasion that they did boil and not roast their meat. Prepared in the latter manner, it is, indeed, more agreeable to the taste; but when one is forced to eat it without vegetables, it proves too heating and disorders the stomach at the end of some days.

I shall not describe with minuteness the dangers to which our traveller was exposed in those solitudes, where it is continually necessary to climb steep rocks, to pass over torrents, to walk over rotten trunks of trees, which break in under the feet of the traveller; where a dreadful gloom reigns in the woods, a

gloom occasioned by the thickness of the trees, by vines and creepers which connect their branches,* and still more by almost continual fogs which envelop these humid mountains.—Michaux had found a new species of *pavia*, of *elethra*, of *azalea*, and of *rhododendrum*; the enthusiasm of science supported his

* The species of plants which tie the branches of trees together are very numerous in the latitude referred to in the text. The principal of them are the various species of grape vine [vitis] the rhamnus volubilis, bignonia radicans, bignonia orucigera, the zizyphus scandens, but principally the long moss, or Spanish beard [tillandsea usneascites] We shall subjoin the interesting description which the late William Bartram has given of this singular and surprising vegetable production. "It grows," says he, "from the limbs and twigs of all trees in these southern regions, from N. lat. 35° down to 28°, and I believe every where within the tropics. Wherever it fixes itself on a limb or branch, it spreads into short and intricate divariations; these in time collect dust wafted by the wind, and which, probably by the moisture it absorbs, softens the bark and sappy part of the tree about the root of the plant, and renders it more fit for it to establish itself; and from this small beginning, it increases, by sending downwards and obliquely, on all sides, long pendant branches, which divide and subdivide themselves ad infinitum. It is common to find the spaces betwixt the limbs of large trees almost occupied by this plant; it also hangs waving in the wind, like streamers from the lower limbs, to the length of fifteen or twenty feet, and of bulk and weight more than several men together could carry; and in some places, cart loads of it are laying on the ground, torn off by the violence of the wind. Any part of the living plant, torn off and caught in the limbs of the tree, will presently take root, grow and increase, in the same degree of perfection, as if it had sprung up from the seed. When fresh, cattle and deer will eat it in the winter season. It seems particularly adopted to the purpose of stuffing mattresses, chairs, saddles, collars, &c. and for these purposes, nothing yet known equals it. The Spaniards in South America, and the West Indies, work it into cables that are said to be very strong and durable. But in order to render it useful, it ought to be thrown into a shallow pond of water, and exposed to the sun, where it soon rots, and the outside furry substance is dissolved. It is then taken out of the water, and spread out to dry; when, after a little beating and shaking, it is sufficiently clean, nothing remaining but the interior, hard, black, elastic filament, entangled together, and greatly resembling horse hair."—*Editor.*

strength, and left him scarcely time to think of fatigue. When he had arrived at the sources of the river Tennessee, on the western side of the mountains, he found a charming plain one mile in extent, covered with the most delicious strawberries, of which he collected sets that have since perfectly succeeded in France. This was the term of his journey; he returned to Charlestown, where he arrived the sixth of July, after having travelled nine hundred miles through Carolina and Georgia. From the south of the latter province he brought back a species nearly allied to the Peruvian bark, which the inhabitants of the country use in intermittent fevers, and which among us will probably become useful in medicine. This tree, which he described under the name of *Pinkneya pubescens*, can endure the winters of our southern departments. It is now cultivated in the garden of Mr. Cels, and in that of the Museum.

(To be continued.)

ANTI-CRITICISM;

OR,

AN ANSWER TO AN ARTICLE IN THE PORT-FOLIO, ENTITLED, "AMERICA BY FRENCH PENS."

TO THE EDITOR OF THE WESTERN CLEANER.

Sir,

I have been just reading a communication in the Port-Folio, in which the author pretends to repel the gross and slanderous misrepresentations which travellers from Europe and particularly Frenchmen, have so constantly disseminated in their writings concerning this country. I am born an American, Sir, and I boast of this quality. Had I to choose to my own will my native country, still my choice and my preference would undoubtly fall upon the one which really has given me birth. If I appeal to my own heart, I feel it beating strongly for America. And yet, Sir, I cannot help thinking in a very different manner from the writer of the article, with respect to his accusation a-

gainst *foreign pens*. I have travelled in Europe, not long enough, indeed, to imbibe European prejudices or to learn to slight my country, but sufficiently to divest myself of some of my own prejudices and to acquire some knowledge of facts that allow me to establish those comparisons which alone can lead to a just and impartial appreciation of things, of men and of manners. With all these advantages, I may be mistaken in my opinion, but such as it is, I shall submit it to your judgment, and if you have no objection, to that of your readers.

"Every American," it is said, "ought to defend the good name of his country." There can be no doubt of this. It is incumbent upon every one of us, whose talents, leisure and other circumstances, qualify him for the task, to refute errors and misrepresentations, to subvert false accusations by facts and to re-establish against any attempt at defamation, the integrity and purity of our national character. But, permit me, Sir, to ask you, is every criticism slander and calumny? Can we suppose ourselves to be absolutely spotless? Is it really true, that our country is the best under heaven, and our national character as far as it is developed, the fairest and most recommendable that ever existed or can exist? It would be ridiculous to answer the question when presented in this simple manner. Conceit is conceit, whether it belongs to an individual or to a nation; in the latter case, indeed, this selfish feeling may assume the noble name of patriotism, but when stript of its false colors, it will appear, in the one case as well as in the other, in all its hideous deformity. And should it really have happened, that foreigners have "dipt their pen into gall," we ought not to content ourselves merely with downright abnegations, but oppose facts to facts, and should we find here and there some glimpse of truth, hold in mind the golden maxim: "*fas est et ab hoste doceri.*"

We may suppose that the writer of the article, to support his accusation against *French pens*, has selected the very strongest proofs of their want of veracity and of those *monstrous* exaggerations reproached to them. Let us examine them one by one. The first instance selected is a passage from a statistical work of the Abbé Robin who visited Boston in the year 1780

The Abbé describes the houses, which at that time were almost wholly of wood, in the following manner:

"Every part of them is so securely fastened, and their weight, compared to their size, so inconsiderable, that they can be moved from place to place. I saw some, two stories high, transported half a mile. The moveable houses of the Scythians were much less extraordinary."

Now this is certainly exaggeration, the fruit of a lively French imagination. It stands nearly on a parallel with the answer of the French barber in Sterne's sentimental journey, when he asserts that his wig might be plunged into the ocean without losing any part of its original perfection. Passages of this kind may, no doubt, extort a smile from our gravity, but to be sure, we cannot by any means consider them as derogatory to our national dignity.

The second remark of the Abbé, which gives much offence to our countryman, refers to the comparatively short period of life in the United States.

"At twenty years old," says the Abbé, "the women lose the color and complexion of youth; at thirty-five or forty, they are wrinkled and decrepid, the men shewing almost the same premature decay. Presuming that the life of man was shorter here, I have examined the graveyards of Boston, and I have seen by the tombstones, that few exceeded fifty years, very few reach to sixty, almost none attain to seventy, and beyond there exists no register."

I am sorry to say, that the Abbé's assertion appears to me, upon the whole, perfectly correct. That our country-born women, generally speaking, fade at a very early age, is a remark which is not contradicted by many. The observation which the Abbé made in the graveyards of Boston, I have frequently made myself in those of New York, Philadelphia and Baltimore, and always with the same result. In our streets we meet but very few old people, though certainly instances of a very advanced age are not quite so scarce as the French traveller pretends; but upon investigation we will mostly find, that those favored individuals are born in Europe, or at least persons descended in the first degree from foreign parents. The bills of mortali-

ty, which is the only thing opposed to the Abbé's assertion, are but a feeble proof of the contrary, because, not to mention, that they are not yet kept amongst us with sufficient regularity to be fully relied on, they never discriminate natives from foreigners, which form so considerable a part of our population. And could it be even admitted, that on a fair examination, the rate of mortality, is the same as in Europe, we might still entertain a suspicion that there is something in our climate which shortens human life, because the easy and plentiful subsistence that is earned by our laboring classes, which in every country form the bulk of the population, ought to give them in this respect a very great superiority over the same classes in Europe, among whom, misery in all its shapes is so essentially inimical to the duration of existence. After all, Sir, I cannot see, why *we* are slandered, when it is supposed that our climate is not altogether favorable to health. Are *we* masters of wind and weather? or what harm will it do to admit the observation as a fact? It may prevent, I grant, the emigration of some individuals from Europe; but the rapid increase of our internal population renders this supply altogether unnecessary, and finally, those who will be strongly inclined or interested to settle among us, will not regard any more the intemperature of our sky, than thousands who, in quest of fortune, go daily to visit regions still more destructive to health, and to find far from their native land a premature grave.—But enough of this, let us now proceed to the next point of accusation.

"The Abbé's chimney caught fire," says the writer of the communication, "and this *momentous* event is thus related."

"The common people are still attached to their old prejudices. I lately saw an instance of it. The house in which I lodged caught fire; it was occupied by a Frenchman. It is easy to imagine what a stir this must make in a town built wholly of wood. Crowds assembled in a moment; but when they discovered who tenanted it, they ceased their exertion and gazed on it in idleness. I ordered the doors to be shut, horizontally sealed the chimney, which alone was on fire, with a wet blanket, which I kept continually moist. The women of the family flew into a violent passion at sight of the floors inundated with slime

and water; I took nevertheless entire command of the house, while they continued to scold, and to declare the remedy was worse than the disease."

I shall pass over the sneer with which the word *momentous* is impressed upon the reader. There is certainly nothing very important in the fact, but still it is characteristic. The ardent zeal for cleanliness, of many of our good American housewives, is, I believe, peculiar to them. It is very frequently paramount to every other consideration; to health, to comfort, to the preservation of property, and sometimes even to domestic happiness; and the instance which the Abbé has given, is certainly not an improper illustration of a virtue carried to the extreme.

Having thus despatched the Abbé Robin, our critic takes up the famous revolutionist, Brissot de Warville. "It is pleasing," says he, "to see in his work some traits of civility and truth, mixed as they are with occasional errors." The quotations given from this traveller are too long to be introduced here in full. I shall transcribe only that part which probably comprises the reproached errors.

"A stranger in a society of Americans, if he has the misfortune not to speak their language, is sometimes left alone; no person takes notice of him. This is a breach of humanity, because consolation is due to a man distant from his friends and his ordinary means of amusement; of their own interest, because strangers, disgusted with this treatment, hasten to quit the country, and to prejudice others against it."

Should it be high treason, I must candidly declare, that this is true, literally true. I have been frequently a witness of it, and I could not help contrasting this uncourtly behaviour with the one that I experienced myself in travelling for the first time on the continent of Europe, where I had not any more pretensions to public or private notice than the individuals whom we treat in this neglectful manner. We can justly boast, that in the mass of our population there exists a larger stock of sound and clear ideas, than among any other nation in the world; in this sense we may proudly style ourselves a highly enlightened people; but the refinements of social life are not yet familiar to many of us. We are too apt to make politeness consist in scrapes

and bows and empty compliments, or in the strict observance of some ceremonial rules; but that tender delicacy which neither does nor says any thing that might wound the feelings of others, that minute though not mean attention to little practices which render others contented with themselves and with those who surround them, and which, in my opinion, constitutes *true and universal politeness*, these are qualities which are not yet, by any means, common amongst us. Our friendship is frequently graceless, our benevolence without suavity, and our reproofs unaccompanied with that mellowness which pours a healing balm into the inflicted wound. Why should not my countrymen strive rather to smooth some asperities, which may yet adhere to our national character, than to quarrel with those who reproach them to us, perhaps with too much severity.

The next passage extracted from Brissot is the following:

"The luxury which Penn wished to avoid, already appears. They have carpets, elegant carpets in Philadelphia. It is a favorite taste with the Americans; they receive it from the interested avarice of their old masters, the English."

"A carpet in summer is an absurdity; yet they spread them in this season, and from vanity; this vanity excuses itself by saying that the carpet is an ornament: that is to say, they sacrifice reason and utility to show."

The former part of this observation I think dictated by the ardent and austere zeal of a political enthusiast, who found a too severe punishment of his errors in his own destruction; the second part of the remark seems perfectly consistent with truth and reason. The argument which is opposed to it, is rather surprising: "To a Frenchman," we are told, "whose floors are paved with bricks, like the side walks of our streets, carpets must indeed appear a superfluity something like *clothing the earth*, as M. Brissot remarks in another part of his book," &c. Now, when a man sets out to make war, not upon one author only, but upon a whole tribe of them, when he reproaches them harshly with falsehood and ignorance, he ought to be doubly careful to give to his own statements the

highest degree of truth and correctness. The bold assertion of our critic, authorises me to retort upon himself in this instance the reproach of ignorance. In the southern provinces of France only, where the climate requires rather precautions against heat than against cold, the floors are commonly paved with bricks, to which a smoothness, agreeable to the eye, is given by a peculiar kind of varnish. In the north of France, as almost all over the north of Europe, the floors are made of deal, and in more opulent houses they are inlaid, like a checker board, with alternate square pieces of two different kinds of wood, the one of which is of a white and the other of a dark color, as for instance, our maple and our black walnut. These are highly polished and kept in their state of glossy smoothness, by means of wax, in the same manner as our tables and furniture. I do not know any thing more elegant than this practice, which, with a proper attention to general cleanliness, spares not only the trouble, but likewise all the unpleasant and unhealthy consequences of scrubbing. The luxury of carpets in winter, moreover, is perfectly well known all over the continent of Europe; but I grant, that the more easy circumstances of our people, have permitted this article to make its way among us, into those classes of society, which, on the other side of the Atlantic, could scarcely permit themselves to enjoy the same commodity.

One more obnoxious passage from Brissot, will place in the fullest light the "*monstrosity*" of his errors.

"Physicians of this country attribute the consumption to different causes: to the excessive use of hot drinks, such as tea and coffee; to the habit of remaining too long in bed, and the use of feather beds, for they know not the use of mattresses; to the custom of eating too much meat, and of drinking too much spirituous liquors. Women are more subject to it than men, because independently of the above causes, they take but little exercise, which is the only powerful remedy against the stagnation of humors, the great principle of the marasma; they enjoy but little of the pleasure of walking; a movement which, varying the spectacle of nature, gives a refreshment to the senses, a new spring to the blood, and a new vigor to the soul."

I have nothing to say in favor of Brissot's physiological or puthological principles; but the facts which he states in regard to our general mode of living are undeniable, and whether this mode be, or not, the cause of the frequency of consumptions, certain it is that it cannot be favorable to health. The best answer to such *misrepresentations* would be, undoubtedly, to correct our errors of diet; and if we are not highly mistaken, the writer of the article in the Port-Folio, is by his very profession bound to promote such a desirable reform.

Of all the European travellers who have published accounts of our country, no one is treated by our champion with more personal animosity than count Volney.* He is said to be "a man of proud spirit and sour temper; jealous of the least slight, presuming much upon his celebrity as a writer," &c. &c. Be this as it may, what has it to do with his *observations* on America? Would not one almost suppose, that count Volney has personally wounded the pride of our countryman? For he will feel most acutely the arrogance of others, who thinks himself entitled to engross universal respect and admiration. Vanity in such a case, is in strife with vanity, and pretension with pretension.—After this attack upon the character of the man, some of his private conversations are brought forward. This kind of warfare has always appeared to me unmanly and ungenerous. Every public character may be attacked *as such;* but to search for points of accusation into the privacy of social life, where a man will drop many words that he would not print, where every sentence obtains its particular meaning from its connexion with the general conversation, and from a thousand adventitious circumstances, where the malevolent hearer may, through a slight alteration of words, impart to the whole a different sense, or at least a very different coloring, this really, is not fair literary

* I beg the pardon of my countrymen for introducing the name of Volney, under the title which he enjoys since several years, and which has been secured to him by the present government of France. The same title is daily and liberally bestowed among us upon Mr. Rumford of Salem, who, by his unquestionable merit rose from a family much more obscure than that of the French peer.

contention. But no more of this; let me follow the critic in his extracts.

Some remarks concerning American politics under the administrations of Washington and Adams, are first selected. These indeed, are bitter and passionate. I am confident, that no good citizen, no well-wisher to his country, will labor to establish their credit. But can the writer in the Port-Folio have forgotten under what circumstances these remarks were made? At a period when party spirit had risen among us to its highest pitch, and when the crimes of the Jacobinical party in France and the indiscretion of a political agent had involved every Frenchman in this country, if not into personal persecution, at least into those difficulties which the suspicion and diffidence of a wounded nation will naturally create. Is there no allowances to be made for impressions received in a time of public agitation; or are there so many among us, whose personal feelings would leave their judgment altogether unbiassed? In such cases we may pass condemnation on the opinion of a writer, we may trace his errors to their origin, but we will, if we are just and humane, spare the character and reputation of a man of genius, who still deserves the esteem of the liberal and unprejudiced, even when he shows occasionally the common frailties of human nature.

If, from the assertions of Count Volney, concerning our morals and politics, we pass to his observations on the natural constitution of our country, which, by the by, forms the professed and particular subject of his book, we will certainly find much to admire, and generally speaking, but very little to reprehend, at least in the statement of *facts*. Our critic, however, is so much resolved to expose the French traveller as a thorough liar, slanderer and calumniator, that he rakes up even from this part of his publication, a number of statements which appear to him derogatory to our national character. Permit me, sir, to examine some of them in detail.

"The general appearance of the territory of the United States," says count Volney, "may be thus described: an almost universal continental forest; five great lakes to the north; to the west vast meadows [prairies]; In the centre a chain of

mountains, the ridges of which run parallel with the Atlantic coast, at a distance of from twenty to fifty leagues. Upon a sea board of three hundred leagues stand some ten or twelve towns, built of painted plank and of brick, containing from ten to sixty thousand souls."

"Around these towns* are farm houses constructed out of trunks of trees, [log houses] surrounded by some fields of wheat, tobacco or Indian corn, mostly covered with standing wood, either burnt or barked; these fields are divided by fences made out of branches of trees, instead of hedges, while the houses stand ingulfed, as it were, in the bosom of a dark forest: —add to these a capricious and peevish sky, an atmosphere by turns very wet or very dry, very foggy or very clear, very hot or very cold; so variable that the same day exhibits the chills of Norway, the sun of Africa—the four seasons of the year, and one will have in few words, a physical picture of the United States."

What *monstrous* falsehoods!—We all remember, that in the years 1795 to 1798, which was the time when Volney travelled in America, our territory was cultivated like the garden of Eden or like the fields of China; that our cities at that period were exceedingly numerous and as much peopled at least as Pekin, Nankin, Paris or London, that we had no log houses in the country, and that our fields were enclosed every where with hedges and walls. Our climate, we all know, is the most steady and most equal that can be conceived. Let us break to pieces our thermometers, let us deny, like veritable stoics, our feelings of every day, we will support henceforth, that in spite of both, there are here no sudden transitions of temperature; let us erase from the pages of the late Dr. Rush, that truly great and good man, any statement favorable to such perverse opinions, and denounce as traitors all those who would attempt to bring them again before the public!

Count Volney is guilty of still higher misdemeanor when he describes American cookery.

* The expression of Volney is not, *around these towns*, but *without these cities, at a distance from these cities*, which makes a very material difference.

"I will undertake to assert," says he, "that if a premium were offered for a system of regimen the best calculated to destroy one's health, stomach and teeth, none could be found to answer the purpose so well as that of the Anglo-Americans.

"In the morning at breakfast, they pour into their stomachs a pint of warm water, so slightly impregnated with tea or coffee, that it is nothing more than brownish slop. With this they swallow unchewed pieces of hot doughy bread toast, swimming in butter, fat cheese, slices of beef, and salt and smoked ham, &c.—every one of which is difficult to digest. At dinner boiled paste is served up, this they call a pudding; the greasier the better; all their gravies, even that for roast beef, are nothing more than melted butter; turnips and potatoes are drowned in hog's fat, butter and grease; their pastry, called pumpkin-pie, is nothing but half baken greasy dough: to wash down the slimy stuff, tea is brought in almost immediately after dinner; but now it is so strong, that its bitter taste sticks to the throat, and attacks the nerves so violently, that it prevents even the English from sleeping, more than the strongest coffee. Supper is made up of salt fish and oysters, and as Chatellux remarks, the whole day is spent in heaping one indigestible thing upon another. To give a tone to the stomach, fatigued and relaxed, they drink Madeira wine, rum, brandy, and whiskey, all which complete the attack upon the nervous system."

That the writer in the Port-Folio is too well acquainted with dietetics and *materia alimentaria* to admit on his table the fare above described, I have not the least doubt. Many of our private families enjoy the same privilege. Nor shall I deny, that the picture when applied *in all its details*, to any single table, would really be exaggerated. But it is not so when considered as a general and compendious view of what takes place in various degrees in by far the greatest number of our families. Of this I have convinced myself when travelling over the country. Out of a hundred taverns and boarding houses, ninety-nine offered frequently to my greedy appetite, nothing but exactly the dishes stated by Volney, and when my poor stomach, sorely discomfited, was suffering under the pains of an indigestion, all my patriotism could not persuade me, that lard and plumb-

puddings, warm butter cakes and pumpkin-pies entered essentially into the diet of the gods in Olympus.

The prince of Benevento (Talleyrand) terminates the review of our critic, who cannot take leave of Volney, without paying him a valedictory compliment. "Mr. Volney," according to his assertion, "when in America, used to say with his accustomed vanity, that such men as Mr. Talleyrand furnished the outlines of a work, and then employed authors of profession like himself to put them into style." The great beauty," adds he, "of the following extracts from Mr. Talleyrand's book, induces me to believe, that Mr. Volney's pen was not *hired* on the occasion," For the truth of the anecdote we have no other authority but that of our champion, which, indeed, amounts to very little, as long as he chooses to keep his half-incognito.* That the pen of count Volney *was never hired*, I dare positively affirm, from the personal knowledge I have of his character and from the general tenor of his private and public life. At any rate, justice might have been rendered to the warm and brilliant pencil of the prince of Benevento, without offering an insult to another. The dignity of the writer, who means to instruct and to enlighten mankind, ought at any time, to prevent him from descending to personal abuse, and the best cause, instead of being supported, is liable to receive essential injury from such unworthy weapons.

I shall not transcribe the very eloquent passage quoted by our countryman from the publication of the prince of Benevento. It presents a picture of the manners and habits of the American woodman and fisherman. "The former," it is said, "is described with some approximation to truth, the fisherman is unfaithfully represented." On this head I feel myself absolutely incapable of deciding, as I have never enjoyed an opportunity of observing either of those classes in a manner sufficiently accurate to justify any assertion.

You will permit me, Sir, to terminate my letter with some general remarks.—How does it come, that so many foreigners, nearly all those who have ever published any thing concerning

* The article in the Port-Folio is signed S. B.

this country, Englishmen, Frenchmen, Germans, &c. have concurred in representing us, if not under odious, at least under unfavorable colors? Whence this consent of the writers of several nations, which among themselves offer the greatest variety of habits, manners and principles? How does it happen that the man who travels under the auspices of an honorable independence and the needy exile, that the poet and the statesman, the philosopher and the agriculturalist, the mere tourist and the professional book-maker, that all these have agreed more or less to express some dislike of us? To speak with sincerity, Sir, I am almost led to suspect that we are not altogether so hospitable as we generally suppose ourselves to be. We receive, it is true, with open arms, the laborers and artisans of Europe, because we want them. We permit them to exert freely their industry, and happily for them and for ourselves, they find sufficient incitement to do so. But with what eye do many of us consider those, who with a more cultivated mind, bring among us higher pretensions, if not to preferment, at least to esteem. To those of this class who come as mere visitors, and who find themselves in independent circumstances, we offer some paltry dinner, a civility by which we often gratify more our own vanity, than we wish to please our guests, whilst we refuse them all those endearments, by which they might be made to forget that they are far from their homes, from their relations, their friends, and the associates of their youth. With those, who come over to America with an intention of settling among us, many of our people will deal in a much less ceremonious manner. Suspicion, jealousy, envy, contempt, or even persecution, according to their relative *exterior* circumstances, are the lot of most of them, and among so many foreigners of worth, who have visited us, we find but the instances of a few, who, in spite of these hostile dispositions, have succeeded in conquering a situation suitable to their education;* the opposition which they meet

* I am speaking principally of foreigners coming from the continent of Europe. The natives of the British dominions are, for very obvious reasons, so easily naturalized and amalgamated with the rest of our population, that in a very short time their foreign origin is almost forgotten, though their *rights* in every other respect, are certainly not established on a better foundation.

in their efforts for rendering themselves useful is frequently in the very proportion of their personal merit. What I am advancing here, I am ready to substantiate by a series of facts, if ever I am challenged by my adversary.—Persons of this description, it is true, are less wanting among us, than the laboring classes of society. We are in possession of men of talent and genius in almost every line of scientific and literary pursuit. But yet, I should think, that by protecting with care every useful talent, and bringing it forward in a country so particularly fitted for every honorable exertion, we might rouse that noble spirit of emulation which would so essentially contribute to lead us on rapidly to still higher perfection.

To cherish our country, to promote its prosperity by every means in our power, and to support its honor on every emergency, these are the duties of every good American. But pray, Sir, what right have *we* to speak contemptuously of foreigners in general? Are *we* the aborigines of this soil, or can *we* boast of an antediluvian origin? Is it not a very short while only, when our forefathers were themselves foreigners in this country? I have been struck very often with this idea, and at times I could not help thinking, that this disposition of some of our people was owing to the same principle which makes the upstart shrink with scorn and disgust from the sight of misery and want. Happily, sentiments of this kind can never enter the bosom of the better class of my countrymen, who are always eager to receive as kindred, those who in so many respects are entitled to their protection.

I have frequently heard complaints of the bad conduct of foreigners, of adventurers flying to America, to find impunity for crimes committed, or under the expectation of meliorating their fate in a distant country through deceit, imposture and guilt. I have heard these motives proffered as a plea for the neglect, diffidence and coldness, with which we treat commonly foreigners. That many individuals from abroad fall really under the above description, there is not the least doubt. The remoteness of our country from Europe, the almost unbounded liberty granted by our constitutional laws, and the extreme mildness and forbearance of our criminal code, are as many incen-

tives to invite over to us such characters. The emigrants whom we receive are a motley collection of outlaws and votaries of vice, of honest workmen and laborers, of scientific inquirers, and of martyrs to virtue and patriotism. The motives which engaged our forefathers to leave their native soil were equally various; religious or political persecution, spirit of adventure, the fear of punishment or actual deportation. Is it either just or suitable to our interest to shun the trouble of an investigation, and to ingulph the whole class of strangers into one general condemnation? Are we so little enlightened, or so destitute of sagacity, as to be incapable of any discrimination, to be reduced to shelter ourselves against fraud, imposture and intrusion, only by the barriers of cold distance and reserve? Vice, indeed, may occasionally put on the garb of virtue, and cunning may appear in the garb of simplicity, but the triumph of hypocrisy is commonly short, and its defeat always shameful; and should we, in any particular case, have grounded motives of suspicion, we will do well to act according to the words of the gospel: "*By their works ye shall know them.*

I hope, Sir, you will not find, that my warm zeal for a class of men too frequently neglected and occasionally even persecuted among us, has carried me too far in their defence. I thought to owe them this apology, as a grateful retribution for the kind, obliging and sometimes tender attentions, which I have found in my travels to the continent of Europe. But in doing so, I had still another interest at heart, that of the glory of my country. We are an industrious and enterprising people; in the means of establishing and increasing our fortunes we display a sagacity, which has perhaps never been equalled; we seize eagerly upon every thing that can add to our comforts in life; in many arts, and especially in mechanical contrivances, we have shewn the most creative genius; no branch of science or of literature has been left by us uncultivated—let us add to all these shining qualities, that character which forms so conspicuous a trait in the glory of a civilized nation, that character which some of us possess in its most amiable form, but which is not yet among our national virtues, that of a mild and tender *hospitality.*

☞ For want of sufficient room, we are obliged to postpone the topographical and statistical sketch of Pittsburgh to the next number.

Editor.

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REVIEW.

An Address on the Botany of the United States, delivered before the Society for the promotion of useful arts, at the Capitol, in the city of Albany, on the 9th day of February, 1814. *To which is added, a catalogue of plants indigenous to the state of New York. By Jacob Green, A. M. Albany*, 1814, 76 *pp.* 8vo.

IT is a pleasing spectacle for the American patriot, to see the improvement of the mind, among us, keep an equal pace with our rapid advancement in every thing that contributes to the comforts of life. A few years past, nearly all the learning of our country, was confined within the narrow circle of those cities, whose situation on the sea coast affords them the means of acquiring wealth by commerce, which, in its turn, creates that leisure which is so indispensable for the prosecution of knowledge. At a distance from these favored spots, all the attention of our citizens was engrossed by the care of providing for the necessaries and commodities of life. At present a noble emulation animates in this respect some of the remotest parts of the Union, and in some of the smaller towns of our country, we see not only individuals cultivating with success, the commerce of the Muses, but even literary bodies established, whose labors can support an honorable parallel with those of some older societies in our cities, which, at the same time, are sinking fast into the sleep of inactivity. The society for the promotion of useful arts, established at Albany, is among those whose exertions deserve the highest credit. Though very young, it has already gratified the public with two volumes of interesting memoirs. Annual addresses are delivered by members of the society, in which such general views are presented, as may give useful hints for further investigations. In the annual address delivered in the year 1813, Dr. Theodoric Romeyn

Beck had given a masterly sketch of the mineralogical resources of the United States, and pointed out the uses of the fossils and minerals already discovered, for the establishment and extension of our domestic manufactures. In the address which we have before us, and which was delivered in the beginning of the present year, Mr. J. Green has followed a similar plan. After some general observations on the importance of botanical study in our country, and on the peculiar advantages, which we possess for botanical inquiries and improvements, he proceeds to a rapid view of those of our native plants, which claim particular attention from the agriculturalist, the manufacturer, the artist, and the physician. Few of his observations, indeed, are altogether new, but compressed as they are into the smallest compass, and tending directly to the greatest practical utility, we cannot but be thankful for this valuable production. We shall transcribe from this part of the address some passages, which we recommend particularly to the attention of our western farmers.

"The Sinapis or Mustard is a plant which might yield no small profit to the American cultivator. Small clusters of it are seen growing in our fields and gardens; but whether it is a native of the country, or merely the fruit of chance, I am not able to determine. In some catalogues, however, it is marked as an exotic; but our climate is congenial to its habits, and almost every soil is adapted to its growth. A gentleman from Orange county, in this state, (New York) has informed me, that he collected from half an acre of but tolerable land, fourteen bushels of the seed, which he believed equal in quality, to that of the sinapis arvensis, commonly known by the name of Durham mustard. There are many species of this herb, but it would be well for the cultivator to confine his attention to the one just mentioned, the seed of which is more abundant and of a better quality than in the ordinary kinds. The high price given for imported mustard, and the facility with which it can be raised, induce a belief, that farmers generally might find their account in making it an article of culture and traffic."

"The curious and beautiful candle berry myrtle [myrica cerifera] is very abundant in many parts of the United States.

The wax which this tree yields would amply compensate the trouble of obtaining it. In Maryland, on the shores of the Chesapeake, and near most of the streams which flow into that bay, it is found in large quantities. It is also scattered even in this state, growing in a wet soil, and very rarely exceeding five feet in height. The plant, however, is not confined to marshy grounds. I have seen it in upland in Connecticut, rising to the height of 10 or 12 feet. This species, indeed, is rarely seen, and the berries are not so abundant in this as in the other kinds. In Louisiana there is another species of this tree as large as the cherry, bearing pointed leaves [myrica cerifera angustifolia]. In France, the myrtle is cultivated for its wax, which is prepared by simply boiling the berries in water; the wax rising to the top of the vessel. It is apt to be of a pale green color, which is not reckoned handsome. This however, may probably be remedied by throwing some alkali into the boiling water, which will convert the wax into a deep green.....By chemical agents it is probable that almost any color may be given to this wax.—From 4 lbs. of the berries 1 lb. of wax is obtained, superior in quality, and applicable to all the purposes of bees' wax. Candles made of it, afford a clear white flame; and if burned newly made, they emit an agreeable, and it is said, a salubrious odor. Should the myrtle wax excite proper attention, it might be highly advantageous to medicine as well as to the arts."

"The papaver or poppy, for the variety of its species and the richness of its color, is not exceeded by any of the garden flowers. The petals, both of the single and double kind, are ornamented with every shade of crimson, yellow and purple; and hence, we find it prized in this country more for its beauty than its inherent virtues. It begins, however, to receive some attention for its medicinal qualities, in many parts of this country.—In our neighborhood, at Niskeuna and Lebanon, the society of Shakers raise the papaver somniforum; and they have supplied this city (Albany) for a short time, with opium, some of which was little inferior in quality to that imported from the Levant, or East Indies. Dr. Rickertson, of Dutchess county, in this state, also cultivated the poppy to advantage. From one plant he procured seven grains of opium.....As far north as New

Hampshire, Dr. Spalding prepared this gum from the true opium-poppy [papaver album] and also from the common poppy of the gardens. These experiments are sufficient to prove the readiness with which this plant may be raised, in almost any part of the country, and the valuable addition it would make to our domestic resources will not be questioned".....

"But I must observe that the opium of the poppy is not the only benefit which its cultivation would afford.—From the seeds an oil may be extracted, as salubrious and agreeable as the finest Florence oil. The quantity of this oil which is consumed, and the frequent difficulties which attend its importation, would make the extraction of it from the poppy a lucrative employment.* I am glad to state, that in Pennsylvania, some acres of ground are planted with the poppy for this purpose.† As the quality of the olive oil, is much affected by the aridity, or richness of the soil in which the plant grows, it would be well to notice these circumstances in the cultivation of the papaver. It is hardly necessary to add, that the opium and the oil may both be extracted from the same plant." ....

"The fiorin grass, or agrostis stolonifera, is a native of the United States. Our fellow-member, Charles Whitlow, first discovered it in Sussex county, New Jersey, and afterwards on the margin of the Genessee river. It grows also in great profusion on the land below this city."

"The fiorin grass has excited much attention in this country, since the introduction of Merino sheep; these animals being remarkably fond of it, and the grass, from its succulent qualities, being well adapted for their fodder. Indeed, most cattle

* There have been many doubts suggested respecting the wholesome qualities of this oil, but the question, that it is not deleterious, is now settled.—See the Abbé Rozier's experiments, quoted in Archives, Vol. II. pp. 176.

† At Harmony, half a day's ride from Pittsburgh, the citizens use oil expressed from the poppy seed, exclusively, in lieu of olive oil for sallads, &c. It is nearly, if not quite, equally good. This oil is becoming common in Europe as a substitute for olive oil. I do not see why its use should be confined to the settlement of Harmony.

prefer it as food to the other grasses; and it is particularly proper for cows, as it is said to increase the quantity and improve the quality of their milk."

"The advantages in agriculture of the agrostis are of no recent date. There is a species of it called durva, growing in the north of India, which for a long time, has been very greatly prized. Sir William Jones in his catalogue of Indian plants, when speaking of this, observes, "its flowers in their perfect state, are among the loveliest objects in the vegetable world, and appear through the leaves like mixed rubies and emeralds in constant motion from the least breath of air. It is the sweetest and most nutritious pasture for cattle, and its usefulness, added to its beauty, induced the Hindoos in their earliest ages, to believe it the mansion of a benevolent nymph. Even the Veda, (or holy and immortal book) celebrates it in the following text from the Athervana: "May Durva, which rose from the water of life, which has a hundred roots and a hundred stems, efface a hundred of my sins, and prolong my existence upon earth a hundred years."

" Among the many superior qualities of the fiorin grass are the following—Its active principle of life, which is not destroyed by the operations of nature fatal to the other grasses—It thrives equally well in a moist, dry, and shallow soil—It appears little affected by the influence of the sun—Hence it may be found growing near the north side of a wall—It is regardless alike of the severe cold of the winter, and the intense heat of the summer—Its crops are enormous and double, both crops in one instance, amounted to nearly eight tons and a half per acre, and in another ten tons were gathered."

" The propagation, culture and properties of the fiorin grass have been unhappily exaggerated by the lovers of new improvements, who, not satisfied with advantages which are really peculiar, attribute to this herb every fancied desideratum. Yet, after making sufficient allowances on this score, the fiorin grass has unquestionably many excellencies, which ought to give it the highest standing in this class of vegetables." . . . . .

" The urtica whitlowi, discovered in the year 1810, by Mr. Whitlow, promises to be a better and more lucrative produc-

tion than hemp or flax. Dr. Muhlenberg gave this important plant its present name in compliment to the discoverer. It is found in great abundance on the island below this city—a place perhaps, more fertile in plants, than any other, of equal dimensions in the United States." .....

"The fact is now well established, that the culture of hemp offers a greater profit to the farmer, than if he should employ his time, his labor, and his field, in any other manner heretofore known;—but if the urtica has a finer and stronger fibre, and will produce more on a given portion of land, it will eventually supersede the hemp."

"The soil best adapted to the urtica is wet meadow land; and it will thrive in ground covered with water many months in the year. It grows also to advantage in a rich, moist upland loam. It can be raised from the seed or root, as it is a hardy perennial. The seeds should be planted in the spring, and the roots in the fall months. If the fibre is wanted for the finest fabrics, the plant should be cut while in full flower; but if only for common use, it will yield more by standing till completely ripe. After being cradled, which is the most proper way to cut it, the stalk should be suffered to lie on the ground some days, as the stinging quality which is peculiar to the growing native, is thus removed. The urtica is rotted in the same manner as hemp, only it requires a longer time for the purpose; but it is not affected by the inclemency of the weather."

"The legislature of this state (New York) at their last session, incorporated a company for the manufacture of this plant, and the U. S. have granted a patent to Mr. Whitlow for its discovery."

"While on the subject of vegetable fibre, it is proper to mention the asclepias* and the apocynum cannubinum, both of which grow very luxuriantly on the island in our neighborhood, already mentioned. The fibres of these plants are very strong, and very numerous; and may with little trouble, be converted

* Two new species of asclepias were discovered in this state last summer, by Mr. Whitlow, and a patent has been taken from the office for the manufacture of the staple.

to many domestic purposes. For coarse cordage, or family cloth, it can be used almost in the state in which it is taken from the stalk. The common asclepias or milkweed,* may be employed for the purposes just mentioned; but there is a newly discovered species having much smaller leaves than the others and growing nearly in the same plenty, which will be found to answer better. The silk or cotton taken from the pods of the asclepias when ripe, has been manufactured into hats, and has also been spun into yarn of which cloth has been made, which vies with silk in brightness."†

The pamphlet is terminated with a catalogue of plants indigenous to the state of New York.—As a contribution to the geographical botany of our country, this part of Mr. Green's publication will be certainly very welcome to every lover of the science.

We hope that the members of the Albany society will continue their interesting labors with unabated ardor. The new form which this society has lately taken invites any kind of talent within its sphere to contribute to one general end. In its first infancy, chemical and mineralogical researches circumscribed the circle of their usefulness; but it was soon found, that the limits of activity of literary bodies ought to be the more extended, in proportion as the materials out of which they may be composed are more scarce and their attention engrossed with cares of a different nature. Some few men addicted to any peculiar branch may, indeed, upon the first establishment of an institution analogous to their studies, display the greatest zeal in the promotion of their favorite science, but this zeal will soon slacken; objects of new observations will not be daily presented, and the pursuits of common life will too often interfere with the best wishes of the philosopher. Sloth and indifference

* In the vicinity of Pittsburgh, this plant is known by the name of wild cotton. It is to be remarked, that by proper treatment, the inspissated milky juice of this plant yields a substance very analogous to caoutchouc, elastic gum or Indian rubber. *Ed.*

† In France this cotton is known under the name of Virginia silk, and coverlets, stockings and gloves are made of it.

will be soon the unavoidable consequence of this state of things. But when the plan of the association is more enlarged, when more active laborers are called into the field of scientific and literary inquiry, the weariness of every individual member will be relieved by his associates, a noble rivalship will be created, and it will be found ultimately, that those parts of knowledge which appeared the most remote from the primitive end of the institution will still, when collected into one focus, diffuse genial warmth and contribute to the public prosperity. By adopting these ideas, the society of Albany has set a very laudable example to such associations as may find themselves under similar circumstances, and the especial protection which that society seems to have obtained from the state legislature of New York, is an example not less worthy of the imitation of those legislatures, whose zeal for the promotion of science has been, until now, much less conspicuous.

MISCELLANIES.

POKEBERRY-DYE.

IN our last number we mentioned under the article of Dyeing, upon the testimony of the Aurora, that the juice of the common pokeberry [phytolacca decandra] had been fixed as a permanent color by Dr. Seybert of Philadelphia. We have learnt, in the meanwhile, from very good authority, that all the attempts to accomplish this desirable object, have failed of success, and this, indeed, might be naturally expected, as it is known by repeated experiments, that the red juices of berries cannot be rendered permanent.

Method of obtaining elastic gum or Indian rubber from the milk-weed or wild cotton.

THE plants to be operated upon are to be cut into small pieces and slices, and in this state digested first in water and then in alcohol [proof spirits] till all the substances soluble

in these liquids are extracted. Dry the residuum, and digest it in four times its weight of rectified Seneca-oil. Express the liquid part, by squeezing the substance in a linen cloth. Let this liquid remain several days to settle, then decant off the clear liquid part, mix it with a third part of water, and distil; the elastic gum remains behind. The matter thus obtained, diluted with the necessary quantity of refined Seneca-oil, is spread over clay, moulded into the desired form, in successive layers, until the vessel be sufficiently thick. The whole is then suspended over the smoke of burning vegetable matters, which hardens and colors it. Previous to this last mentioned process, the exterior of the vessel may be ornamented by various means. When the whole operation is completed, the clay mould is broken into pieces and taken out. The vessel is then fit for use.

Besides the common use which is made of this substance to take out the marks of black lead pencils, it may be employed for various other purposes. In South America it is used for bottles and boots, for which it answers extremely well. It is also formed into torches, which burn with great splendor. Garters and elastic tubes made of it possess considerable advantages. It has become highly important in the fabrication of several surgical instruments which require pliability, such as syringes, bougies, catheters, &c. Finally, it yields the best possible varnish for leather which has the property of never scaling off. A person that would employ himself in the preparation of this article would probably find it profitable.

Preparation of Iode.

IN the last number of the Gleaner we have presented our readers with the singular properties of this newly discovered substance. Mr. Frederick Accum of London, whose ingenuity in contriving chemical experiments is generally known, has since favored the public with the following account of its preparation:

"For the purpose of experiment or exhibition in a lecture room, the following easy process answers extremely well."

"Take a thin glass tube about ten or twelve inches long, and three-eighths of an inch in the bore; put into it about one drachm of the uncrystallizable residue which is left behind, after separating all the crystallizable salts from a lixivium or solution of kelp, barilla, or any other seaweed, after it has been previously fused for a few minutes, to free it as much as possible from water, and reduced to a coarse powder; add to it, without soiling the inside of the tube,* about half its weight of concentrated sulphuric acid: shake the whole together, and apply a gentle heat, by means of a taper or lamp. This being done, a dense white vapor will make its appearance, and a black glistening powder, which is iode, becomes sublimed in the colder part of the tube. Then cut to a convenient length with a file, that part of the tube which contains the iode, and seal the extremities of it by means of the blow-pipe or spirit-lamp."

"The preparation of iode upon a larger scale is equally simple and easy. Let a long, slender necked, tubulated retort be placed in a sandbath; surround the whole body of the retort up to the tubulure, with sand, and adapt, without luting, to the beak of it, a wide mouthed phial or receiver. This being done, introduce through the tubulure, first, one part of sulphuric acid, and then two parts of the saline mass before mentioned, broke into small pieces of the size of split pease, and distil for a few mnutes, with a gentle heat. The iode will become sublimed into the neck of the retort in a crystalline form, exhibiting a black shining crust; cut off the neck of the retort with a file, and collect the iode by means of a feather or camel hair brush."

"If the whole of the saline mass of kelp or barilla freed from carbonate of soda only, and which, of course, consists of muriate of soda, muriate of potash, sulphate of potash, hydrosulphuret of potash, &c. be treated with sulphuric acid, the preparation of iode becomes more embarrassing and difficult."

* This may be done conveniently, by sucking the acid up with the mouth into a long small glass tube drawn out to a capillary point, applying the finger to the upper orifice of it, and thus transferring by means of the acid into the larger tube.

By the mere application of heat, the black matter prepared according to the prescription of Mr. Accum, will be converted into a beautiful violet colored gas, which will exhibit all the phenomena mentioned in the last number of the Gleaner.

THOUGHTS AND MAXIMS.

To live is a disease of which sleep relieves us every sixteen hours. It is a palliative; death is the remedy.

—

The part of the man endowed with some foresight is gloomy enough. He gives pain to his friends by pointing out to them the misfortunes to which they expose themselves by their imprudence. He is not believed; and when finally these misfortunes really take place, the same friends are offended with his having predicted them; their self-love is abashed before the friend who ought to have been their comforter, and whom they would have chosen as such, if they had not been humbled in his presence.

—

It is said sometimes of a man who lives solitary, that he does not like company. This is as much as to say of a man, that he is not fond of walking, because he does not like to expose himself in the evening in a wood infested by robbers and assassins.

—

A man of wit is lost, if to his wit he does not join some energy of character. He who is in possession of the lantern of Diogenes, must needs have likewise his cudgel.

—

Every man who is conscious of the nobility of his sentiments, has a right, in order to have himself respected, to act according to his character, rather than according to his exterior situation.

ANECDOTES.

THE Abbé de Moliere was a man simple in his manners and in very narrow circumstances, a stranger to the whole world, except to his labors on the system of Descartes. He had no servant, and was studying during winter in his bed, for want of fuel, having his head wrapt in his breeches, over his night cap, and the two sides of them hanging down on the right and on the left.—One morning he hears some body knock at his door. Who is there?—Open the door.—He pulls a string and the door is opened. Without troubling himself to look about him, the Abbé asks: Who are you?—Give me some money.—Money?—Yes sir, money.—Ah! I understand, you are a thief.—Thief or not, I must have money.—Indeed, you must! Well, search herein, [he presents with a motion of his head one of the sides of his breeches.] The thief searches.—Well, there is no money here.—No indeed, but there must be a key.—Well, this key.—This key, take it.—I have got it.—Go to this writing desk: open it.—The thief puts the key to a wrong drawer.—Don't, don't, you will put all my papers into confusion. To the devil, will you finish, those are my papers; in the other drawer you will find money.—Here it is.—Well, take it; shut the drawer.—The thief runs away.—Mr. thief, shut the door. Heavens! he leaves the door open, what a rascalish fellow this thief is! I must get up in the present cold weather, d——— rascal! The Abbé rushes out of his bed, shuts the door and lies down again quietly to resume his labors.

—

M. de Luynes having left the military service on account of a box on the ear, which he had received without avenging it, was created a short while after archbishop of Sens. One day when he was officiating, an humorous fellow took up his mitre, and drawing it into a square form, exclaimed: How strange! this mitre looks very much like a box!

Poissinier, physician to Lewis XV, on his return from Russia, went to visit Voltaire at Ferney, and mentioned to him with freedom all the falsehoods and exaggerations which this celebrated author had embodied in his history of Peter I. My friend, answered Voltaire, with great naivety, instead of contradicting me, they have given me excellent furred robes and I am very chilly.

—

Lafontaine hearing some person pitying the fate of the reproved in the midst of the flames of hell, observed with his peculiar good nature; I hope that they will get accustomed to it, and that finally, they will be there as much at their ease, as the fishes in the water.

—

M. de Sourches, a little coxcomb, very hideous and of an extremely swarthy complexion, which gave him perfectly the appearance of an owl, withdrawing one evening from company, observed to those around him: this is the first time, during two years, that I am sleeping at home. The bishop of Agde, turning round, and seeing that figure, told him very pointedly: "it is likely, that the gentleman is commonly perching."

—

Lord Bolingbroke when at the court of Louis XIV, during the illness of the latter, gave to him every proof of sensibility. The king, astonished at this conduct, told him, I am the more deeply affected, as your countrymen are not commonly very fond of kings. Sire, replied Bolingbroke, we resemble in this respect those husbands, who, though not very fond of their own wives, are very eager to please those of their neighbors.

—

During a siege, a water-carrier was crying through the town, "six cents the bucket of water." On a sudden a bomb carries off one of his buckets, "twelve cents the bucket of water," cried the carrier, without being in the least discountenanced.

ORIGINAL POETRY.

FOR THE WESTERN GLEANER.

TO DELIA.

SWEET was the moment, when first I said,
Delia, I give my heart to thee;
Sweet was the answer thy frankness made,
O, then thou wast too kind to me.

Bitter that letter, the fatal scrawl,
That made me doubt of love so true;
Bitter, O bitterest thought of all,
To bid each tender hope adieu.

Soothing thy pledges of friendship kind—
Friendship the joy of souls above;
Sweetest of pleasures, that mortals find;
But what art thou compar'd with love?

Mournful a pledge like thy own I give,
And lo! some hairs already hoar—
Friendship for thee in my heart shall live,
Till thus my head is silver'd o'er.

Give me, O give me, one parting tear—
Farewell—farewell—remember me—
Delia, O Delia, thou still art dear,
And is thy friend still dear to thee?

EDWARD.

THE WANDERER.

NOR hoary frost, nor hurtling snow,
Nor wintry winds, that round us move,
Can chill the heart, where friendship glows,
Or quench the gentle fire of love.

Absence!—love speaks with quivering lips—
The mountain wild, the spreading wave—
'Tis like the gloom of dim eclipse,
The chilly dampness of the grave.

Saw you of late thro' earth and air,
Spring smile and breathe her odors sweet,
When winter grasp'd the blooming fair,
And wrap'd her in her winding sheet?

Thus deadly cold the feeling mind,
Wrap'd in the shroud of dark despair,
When all it loves are left behind,
And bleeding passion lingers there.

O Spring, break from the tyrant's arms,
Come, breathe thy sweets around, above,
See blushing beauty deck her charms,
To meet the melting eye of love.

O, to the lonely stranger come,
Sweet mirth with pensive pleasure blend,
Far, far away he leaves his home,
And thou art now his only friend.

EDWARD.

TO MISS.——

I saw the girl, whom all admire,
And started with a doubtful gaze—
That name, that look, that form conspire,
To raise a thought of other days.

Hast thou, Eliza, wandered here,
In form so fair, so much thy own,
Thy friend's unhappy hours to cheer,
And make him feel, he's not alone.

Ah no—that heart ne'er felt with mine,
She saw in me a stranger's form;
But yet, fair one, those eyes of thine,
Tell me thy heart is pure and warm.

O, then forgive my ardent gaze,
In every charm of thine I view,
A picture sweet of happier days,
A lovely, living picture too.

EDWARD.

THE KISS.

AH! why thus thrills my beating heart,
And why thus throbs my burning brain,
Ah! from my lips shall never part
The kiss that gave such bliss, such pain.

I feel it yet, the pressure soft,
Yet thrills my soul—yet pains my mind—
When distant far thus shall I oft
Feel the keen wound it left behind.

Oh take it back! thy wandering heart
Can never love—can never feel,
Oh take it back! but ah! the smart
Nor time nor absence e'er can heal.

"I could have lov'd thee"—but, ah! fled
Are all my *waking* bright *day dreams*,
I soon shall rest this weary head
Where fancy no more sheds her beams.

Then my last sigh shall rise for thee
While dying reason holds her sway,
For dear shalt thou still be to me,
'Till death shall close my weary day.

MARIA.

SELECTED POETRY.

SONG.

BY JUDGE BRACKENRIDGE.

TUNE, "BONY DOUN."

In imitation of Burns.

I VIEW'D the hill, I stept the burn,
In morn of life, when I was glad;
Where are ye gone; ye cheerful thoughts?
Why, am I now, forlorn and sad?
In vain, I look, at tree or shrub!
And try to catch these joys again:
These joys are gone: sensations sweet:
And, but the hill and burn remain.

The cross of hope, the craze of care,
And now the sloping of life's hill;
It withers flowers that grew so fair:
Nor has the blossom fragrance still.
The sun may rise, the day may fall,
The bird and bush be ever here;
But this my heart has lost the charm,
It us'd to pour upon the year.

Contented heart, in youthful glee,
Unruffl'd was my peace of mind;
Each blythsome hour, that past away,
Left, yet, a blyther, still behind.
But friends are gone; my love is lost;
And I am weary here alone;
The loss of pleasure that has been,
Is all I now can think upon.

A HYMN TO CAMDEO.

Translated from the Sanscrit by Sir William Jones.

[THE *Hindu* God to whom the following poem is addressed, appears evidently the same with the Grecian EROS and the Roman CUPIDO, but the Indian description of his person and arms, his family, attendants, and attributes, is new, and displays peculiar beauties.

According to the mythology of *Hindustan*, he was the son of MAYA, or the general *attracting* power, and married to RETTY or *Affection*; and his bosom friend is BESSENT or *Spring*: he is represented as a beautiful youth, sometimes conversing with his mother and consort in the midst of his gardens and temples; sometimes riding by moon light on a parrot or lory, and attended by dancing-girls or nymphs, the foremost of whom bears his colors, which are a *fish* on red ground. His favorite place of resort is a large tract of country round AGRA, and principally the plains of *Matra*, where KRISHEN also and the nine GOPIA, who are clearly the *Apollo* and *Muses* of the *Greeks*, usually spend the night with music and dance. His bow of sugar-cane or flowers, with a string of bees, and his *five* arrows, each pointed with an Indian blossom of a heating quality, are allegories equally new and beautiful. He has at least twenty-three names, most of which are introduced in the Hymn: that of *Cam* or *Cama* signifies *desire*, a sense which it also bears in ancient and modern Persian; and it is possible, that the words *Dipuc* and *Cupid*, which have the same signification, may have the same origin; since we know the old Hetruscans, from whom great part of the Roman language and religion was derived, and whose system had a near affinity with that of the Persians and Indians, used to write their lines alternately forwards and backwards, as furrows are made by the plough; and though the last two letters of *Cupido* may be only the grammatical termination, as in *libido* and *cupido*, yet the primary root of *cupio* is contained in the three first letters. The seventh stanza alludes to the bold attempt of this deity to wound the great god *Mahadeo*, for which he was punished by a flame consuming his corporeal nature and reducing him to a mental essence; and hence his chief dominion is over the *minds* of mortals, or such deities as he is permitted to subdue.]

WHAT potent god from AGRA's orient bowr's
Floats through the lucid air, whilst living flow'rs
With sunny twine the vocal arbors wreathe,
And gales enamor'd heav'nly fragrance breathe?
  Hail pow'r unknown! for at thy beck
  Vales and groves their bosoms deck,
  And ev'ry laughing blossom dresses
  With gems of dew his musky tresses.
I feel, I feel, thy genial flame divine,
And hallow thee and kiss thy shrine.

"Know'st thou not me?" Celestial sounds I hear!
"Know'st thou not me?" Ah, spare a mortal ear,
"Behold!" my swimming eyes entranc'd I raise,
But oh! they shrink before th' excessive blaze.
  Yes, son of MAYA, yes, I know
  Thy bloomy shafts and cany bow,
  Cheeks with youthful glory beaming,
  Locks in braids ethereal streaming.
Thy scaly standard, thy mysterious arms,
And all thy pains and all thy charms.

God of each lovely sight, each lovely sound,
Soul-kindling, world-inflaming, starry crown'd,
Eternal CAMA! Or doth SMARA bright,
Or proud ANANGA give thee more delight?

Whate'er thy seat, whate'er thy name,
Seas, earth and air, thy reign proclaim.
Wreathy smiles and roseate pleasures
Are thy richest, sweetest treasures.
All animals to thee their tribute bring,
And hail thee universal king.

Thy consort mild, AFFECTION ever true,
Graces thy side, her vest of glowing hue,
And in her train twelve blooming girls advance,
Touch golden strings and knit the mirthful dance.
Thy dreadful implements they bear
And wave them in the scented air,
Each with pearls her neck adorning
Brighter than the tears of morning.
Thy crimson ensign, which before them flies,
Decks with new stars the sapphire skies.

God of the flow'ry shafts and flow'ry bow,
Delight of all above and all below!
Thy lov'd companion, constant from his birth,
In heav'n clep'd BESSENT, and gay SPRING on earth,
Weaves thy green robe and flaunting bow'rs
And from thy clouds draws balmy show'rs,
He with fresh arrows fills thy quiver
(Sweet the gift and sweet the giver.)
And bids the many-plum'd warbling throng
Burst the pent blossoms with their song.

He bends the luscious cane, and twists the string
With bees how sweet! but ah, how keen their sting!
He with five flow'rets tips thy ruthless darts,
Which through five senses pierce enraptur'd hearts:
Strong CHUMPA, rich in od'rous gold,
Warm AMER, nurs'd in heav'nly mould,
Dry NACKESER in silver smiling
Hot KITICUM our sense beguiling,
And last, to kindle fierce the scorching flame,
LOVESHAFT, which Gods, bright BELA, name.

Can men resist thy power when KRISHEN yields,
KRISHEN, who still on MANPA'S holy fields
Tunes harps immortal, and to strains divine
Dances by moon-light with the GOPIA nine?
But, when thy daring arm untaim'd
At MAHADEO a love-shaft aim'd,
Heav'n shook, and, smit with stony wonder,
Told his deep dread in bursts of thunder,
Whilst on thy beauteous limbs an azure fire
Blaz'd forth, which never must expire.

O thou for ages born, yet ever young,
For ages may thy BRAMIN'S lay be sung!
And when thy Lory spreads his em'rald wings
To wait thee high above the tower of Kings,
Whilst o'er thy throne the moon's pale light
Pours her soft radiance through the night,
And to each floating cloud discovers
The haunts of blest or joyless lovers,
Thy mildest influence to thy Bard impart,
To warm, but not consume his heart.